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WILLIAM A. MOWRY,
EDITOR.

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1888.

BOSTON:
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EDUCATION FOR 1889.

This high class educational magazine has now commenced its ninth year. It has had a steady gain from the beginning to the present time. Its design is to furnish to the educators of America, the highest, best, most philosophical, most valuable discussions of the great educational topics of the day, both philosophical and practical. The unqualified praise which has been bestowed upon it by the most eminent educators of America, has been highly gratifying. The general verdict has been that this magazine, during the past year, has more than maintained the high character of previous volumes. Plans have already been matured, and still further plans are in progress for making this magazine, during the year 1889, superior to anything heretofore published in this country or abroad. Among the subjects discussed during the present year may be named the following: —

School Reform.
Manual Training Schools.
A Plea for Social Training.
The Study of Elementary English.
Methods for Determining Specific Gravity.
Moral Training in Schools.
The Potential Mood.
What is a State?
Education in the Argentine Republic.
The Philosophy of State and History.
Mt. Holyoke College.
The Study of Ethics in Manual Training Schools.
Means and Ends of Pedagogy.
Preparation for Citizenship.
  1. At Harvard College.
  2. At Amherst College.
Health in the College and University.
Primary and Secondary Schools in Holland
The Teaching of Mathematics.
The Teaching of the English Language and Literature.
The Teaching of the Classical Languages.

Among the writers who will contribute to the ninth volume may be named: —

William T. Harris, LL.D., Concord, Mass.
Francis Newton Thorpe, Ph.D., Uni. Penn.
Supt. J. M. Greenwood, Kansas City, Mo.
Hon. J. W. Paterson, Supt. of Public Instruction, N. H.
Prof. B. K. D'Ooge, Mich. State Normal School.
Rev. A. D. Mayo.
Prof. William A. Merrill, Belmont College, Ohio.
Emerson E. White, LL.D., Supt. Public Schools, Cincinnati.
James H. Fairchild, D. D., Pres. of Oberlin College.
L A. Stager, Polytechnic Institute, Brooklyn, N. Y.
H. E. Shepherd, LL.D., Pres. Charleston College, S. C.
Prof. O. F. Emerson, Iowa College.
Prof. Albert Bushnell Hart, Ph. D., Harvard University.
Miss Ida M. Gardner, Providence, R. I.
Eugene Bouton, Ph. D., Pres. State Normal School, New Paltz, N. Y.
Prof. H. C. Penn, University of Missouri.
C. F. Crehore, M. D., Boston.
Arthur May Mowry, A. M., Salem High School, Mass.
Miss Lillie J. Martin, Indianapolis.
Gen. T. J. Morgan, Prin. Rhode Island Normal School.
Prof. Charles E. Lowrey, Ph. D , Colorado.
Hon. J. W. Dickinson, Sec. Mass. Board of Education.
John E. Bradlee, Supt. Schools, Minneapolis; and a great many others.

Many articles of great value and importance are already on hand for early publication. A number of articles on particular topics are engaged to be written at an early date. Among the special features for next year, may be noted several series of articles like the following: —

1. The Teaching of Mathematics.
2. The Teaching of the English Language and Literature.
3. The Teaching of the Classical Languages.
4. The Teaching of the Natural Sciences.
5. Preparation for Citizenship.

Particular attention is called to the monthly bibliography of current periodical literature upon education. These lists of articles are prepared by a graduate of Harvard, who has lately taken the degree of Ph. D. at Johns Hopkins, and has every facility for preparing such a list and making it complete, covering the entire range of magazines, American, English, French, and German. Each number also contains an article on "Foreign Notes," concerning educational matters abroad, prepared by Miss Anna Tolman Smith, of the Bureau of Education, Washington. From the preceding it will readily be seen that this magazine covers the ground of "the Science, Art, Philosophy, and Literature of Education."

Grateful for the liberal patronage which it has received from the leading educators of the country in the past, and promising their best efforts for its constant improvement, the publishers would respectfully solicit the good offices of their friends throughout the country for a liberal increase of its subscription list.

COMMON SCHOOL EDUCATION, 1889.

The third volume of Common School Education will begin with the next number. The first two volumes of this periodical have proved a phenomenal success. It is the first attempt to establish an educational journal devoted exclusively to giving, by means of serial articles from the best writers, ***systematic and philosophical methods of teaching*** for all subjects and all the grades in our common schools. Since its establishment other journals have attempted to imitate, to a greater or less degree, this plan, but these are essentially educational newspapers, while this is emphatically ***a journal of methods, systematic and philosophical.*** The response from teachers in all parts of the country has been so prompt and cordial as to be especially gratifying to the publishers, showing as it does that such a magazine was widely needed and is gratefully appreciated. Its circulation has rapidly increased every month from the time the first number was published to the present.

The editor and the publishers take great pleasure in announcing that they have been particularly successful in their plans for the next volume. The several series of articles for 1889 include best methods of teaching in the following subjects:—

1. Spelling. By Miss Anna B. Badlam, Rice Training School, Boston.
2. Reading. (Yet to be arranged.)
3. Arithmetic. Larkin Dunton, LL. D., Head Master Boston Normal School.
4. Geography. Dr. Dunton and Miss Moses, both of Boston Normal School.
5. Language. L. W. Russell, A. M., Prin. Bridgham School, Providence, R. I.
6. Drawing. (Possibly continued by Prof. W. S. Perry of the Pratt Institute, but if not, then a new series by another hand.)
7. Clay Modelling. Miss May Mackintosh, Weehawken, N. J.
8. Kindergarten Methods applied to Primary Schools. Miss Mackintosh.
9. Botany. Prof. W. Whitman Bailey, A. M., Brown University.
10. Natural History. (Yet to be arranged.)
11. History. William A. Mowry and Miss Nina Moore, author of "Pilgrims and Puritans."
12. School Management. (Yet to be arranged.)
13. How do your Pupils Learn? N. A. Calkins, LL. D., assistant Superintendent of the New York City Schools.
14. The Study of Synonyms. Miss Ruth E. Mowry.
15. Extracts from the "Long Ago." "Ye Ancient Pedagogue."

To these may be added the following departments:—

16. Editorial.
17. Happy Hours.
18. Examination Questions.
19. Book Notices.

Besides these each number will have a leading article upon some general subject. Not all of these serials can be carried on at the same time but the greater number of them will begin with January.

It will be the aim of the editor and publishers to add new features from time to time and many of the most important series of articles will be republished in book form when completed.

Grateful for past favors, a continuance of your patronage and support is respectfully solicited.

6/

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WM. A. MOWRY,
EDITOR.

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COMMON SCHOOL EDUCATION,

DEVOTED TO THE ART OF INSTRUCTION.

VOL. II. JANUARY, 1888. No. 1.

TEN MINUTES FOR REFRESHMENTS: A SCHOOL SYMPOSIUM.

BY GEORGE RUGG,

Principal Thompson-street Grammar School, New Bedford, Mass.

WE hear it frequently stated with an air of great positiveness that this is the children's age; that the young people assert their prerogatives at very tender years, and in many ways are tolerated where formerly they were forbidden. But observe when their curious minds lead them to solicit time and a patient hearing from their parents, the old genius of selfishness rises supreme as ever, and "children should be seen, and not heard," is as sternly and forbiddingly spoken as of yore. Consider the various homes in the community for proof of this. In the miserable hovel or squalid tenement house, the child too young to work is a curse, and is hounded to his garret or driven into the street. In those better homes which, however, must be sustained by hard work from early morn till nightfall, the tired parent is in no mood for children's prattle or eager questions. The Cotter's Saturday Night is, unfortunately, the exception, not the rule.

But enter one of the very many homes where comforts abound and luxuries creep in. The same repressive attitude toward children is strikingly apparent. Mother is busy with sewing, book, or callers; father must read his newspaper; the children must quietly amuse themselves. They have books, pictures, toys, but their little hearts are bursting in this atmosphere of suppression. Where is the magic touch of sympathy? Where is The Children's Hour? The average well-to-do parent, with time at his disposal, thinks he has done enough for his child if he feed, clothe, and book him, and through downright criminal selfishness refuses to give time and a ready ear to the natural, spontaneous outbursts of the little one's eager, questioning mind. He asks for bread, and he gets a stone. And the result? Some one has said childhood is conservative. True; for the snubbing of the average parent is enough to drive any child into his shell. That a father should not daily make loving advances to his child is as unfortunate as that the morning sun should refuse to make the young earth glad. It is evident, then, that the child needs more encouragement to open his heart and mind with a view to his better development.

What can we do for him in school? Give him ten minutes for refreshments. This requires an immediate explanation, that the reader's mind may not wander off to pastry shops or lunch-basket carnivals. The meaning of the phrase as here interpreted is that the children shall be given ten minutes in the day when some topic or topics shall be presented which shall stir them up, make them ask questions, suggest incidents in their own experiences, and, in a word, "get them to talk."

One difficulty meets the teacher at the outset — that of suspicion. His pupils have been silenced so often at home that they do not immediately appreciate the opportunity now offered them. But, thank God! the natural bias of a child is toward ingenuousness and self-forgetfulness, and soon they will fill up your ten minutes spiritedly.

Come into the school-room and listen. The time has arrived and we are ready for a chat. "How many ever stood on the beach and watched the waves come in?" Every hand up. "Well, did you know that a wave was n't really water, but only a form of water?" This distinction is too much, and they are confused. Quickly a girl rises, and says: "I 've walked on the beach, and the waves came in and wet my feet. Was n't that water?" "Yes, May; but you might have dipped that same water in a barrel, and it would n't be a wave then." Presto! up goes a hand. It is that of a girl in the front seat who has been gazing into space in strenuous thought during the foregoing dialogue. She has nailed the idea, and exclaims: "Oh, I see it! The wave went over the top of the water like a big wagon; but the water stayed behind like a road." Others see it now and raise their hands, anxious to have their quick perceptions recognized. Here is an atmosphere with which even Gail Hamilton can find no fault. Every one has been interested and a number have talked.

At another time, the mention of windmills brings to his feet the dullest boy in the room, an expert, however, with the jackknife. He explains how he whittled out an ingenious contrivance and set it up in the yard to run by wind power. The boys prick up their ears, and at recess besiege Harry with questions.

Is it ever right to tell a lie? One girl says if she were very sick she would want the doctor to tell her the truth. Another pupil says she would surely tell a lie to save her girl chum from any great trouble. A debate is brewing; the class are taking sides.

But why multiply instances of the possibilities lying within the daily ten minutes? Why comment on the opportunities presented to the teacher for inculcating deep moral truths through the medium of the informal daily talk? Here is the chance for genuine eloquence; for a bright, living truth will steal in like music to the heart of a child, if properly and earnestly presented. Now for that "imaginative sympathy" of which Fitch speaks, which shall enable the teacher to raise himself above the dead level of his association with his pupils, and shall bring into lively play the reasoning powers of their minds and those deep intuitions so frequently astonishing in the young. As Locke says: "The pupil will then begin to value knowledge when he sees that it enables him to discourse, and he finds the pleasure and credit of bearing a part in the conversation and of having his reasons sometimes approved and hearkened to. This way lets things into the mind which stick there."

The limits and requirements of an ordinary recitation do not admit of such direct, personal, informal talks as have been mentioned. With a certain range of ground to cover and a large number of pupils, the lesson suffers by much side talk. But lessons alone never can complete the education of a child. Their tendency is toward the development of memory and the neglect of the reasoning faculties. It is these latter which should have the special solicitude of the teacher.

The "ten minutes" is like the opening of windows. It brings in a rush of wholesome, stimulating thoughts, and contributes to the easy governing of the school. And right here comes in the element of personal magnetism. To govern a school most satisfactorily, you must control its public opinion. This can be done if you make yourself sufficiently desirable to its members. The question of personal magnetism receives too little attention nowadays, in the swing of the pendulum toward "system, highly organized supervisory boards," etc. The teacher should be the rallying-point of his class, not the grim ogre who hears lessons for eighty dollars a month. By encouraging daily contributions of personal experience from the boys and girls, the *esprit de corps* of the class is wonderfully strengthened. Once get a class to meet its teacher on the common ground of mutual interest, and the little world of the school-room grows beautiful and impressive day by day.

The difficulties in the way of good citizenship should be solved within school walls. A good citizen is positive, aggressive, outspoken. The characteristic silence of the majority of voters on questions of public importance is discreditable to the liberty of free speech. Even silent men cannot escape suspicion. We will recall the remark of the sagacious Spectator, that "he was once taken up for a Jesuit for no other reason than his profound taciturnity." Seriously, we are a nation of whisperers and grumblers, rather than of bold, thoughtful talkers. Any scheme which will assist in energizing young children and put true purposes in their hearts is of importance. Viewed in this light, the *ten minutes* has its place in the school curriculum.

A READING LESSON.

A BIG boy in a country school was reading in the New Testament, at the devotional exercise in the morning.

He spelled the words out as follows: —

"A c-e-r-t-a-i-n w-i-d-o-w p-u-t i-n t-w-o m-i-t-t-e-n-s, w-h-i-c-h m-a-k-e a f-a-i-r t-h-i-n-g."

SCHOOL-ROOM WORK — HOW — WHY.[1]

BY N. A. CALKINS.

I.

OBJECT-TEACHING.

MORE than twenty-five years ago the following embodiment of the principles of teaching was placed on the title-page of my book on Primary Object Lessons: *Present to children things before words, ideas before names. Train them to observe, to do, to tell.* The principles therein set forth have been repeated in many different forms since, but the embodied thought remains essentially the same. During this period experience has deepened and broadened my convictions as to the importance of careful attention to the foregoing principles in the education of children. That experience has also led to the use of some new methods in presenting things to children, and to new ways of the doing by them in the processes of instruction. Some of these new ways of doing have led to the use of new terms, which indicate chiefly a characteristic of the methods of teaching, rather than any change in the principles.

In the present series of articles it will be my aim to present some of the new ways that may be used in *training children to observe and to do.* It will also be my endeavor to emphasize the importance of using each of the subjects in a course of instruction as a means toward the harmonious development of the powers of the pupils, rather than as matters to be simply learned. Development of mental and moral powers, and training in right habits of thinking and doing, constitute the first purpose in teaching. Leading the pupils to get correct knowledge of the subject is a means in the training.

In order that children may have the power to recognize with exactness the *shapes* of objects, it is necessary to provide for them special training by means of regular forms. In determining what forms shall be used in the first lessons, it must be ascertained which of the forms, already familiar to the pupils, possess so few and

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simple characteristics that these can be easily perceived and subsequently used as an aid in the teaching of other forms less familiar to them. It will be admitted that the shape of the sphere, so well known in balls, marbles, oranges, etc., is a familiar form appropriate for the first lesson. But the teacher should not suppose that the pupils know even the few characteristics of the sphere with that degree of exactness which is necessary to accuracy in habits of observation and to clearness of knowledge; therefore it is well to proceed with the first lesson somewhat as follows: —

FIRST LESSON. — SPHERE.

Provide a sufficient number of this form to allow each pupil to hold it, to roll it between both hands, to notice by the sense of touch and of sight that it is round every way, and that it will roll every way. Write its name on the blackboard and require the pupils to pronounce it slowly as if spelled *s-feer;* and to mention other objects having the same shape.

Modeling the sphere. — In classes where proper facilities can be provided — such as suitable clay, a molding-board one foot square, or a sheet of thick paper to place on the desk — the lesson may be continued by giving to each pupil a piece of prepared clay about the size of an inch cube, and requesting the pupils to roll the clay every way between the palms of their hands until the sphere is formed.

SECOND LESSON. — LINES.

Place a string in front of the class in a vertical position; request each pupil to point with the forefinger toward the upper end of the string and to move the finger slowly downward to the lower end. Repeat this movement four or five times — all the pupils moving the finger at the same time.

Change the string to a horizontal position, and request the pupils to point at it, moving the finger from left to right. Repeat this movement four or five times, requiring the pupils to follow the string with their eyes as the finger moves from end to end.

Change the string again to an oblique position and request the pupils to point at it, moving the finger from left downward toward the right.

Next draw three lines on the blackboard, each about one foot in length, and require the pupils to point at each and to name its position; as, vertical, horizontal, oblique. Repeat this exercise of pointing three or four times; then request the pupils to hold splints so as to represent each position; also to point out objects in each of these positions.

THIRD LESSON. — DRAWING LINES.

Place upon the blackboard vertical, horizontal, and oblique lines. Request the pupils to rest their slates in a vertical position and to draw each line twice; then to place the slate upon the desk in its usual position for writing, and to draw each line three or four times, with free movement of the arm, and to make it from four to five inches long. Let the drawing of each of these lines be repeated, also, from dictation.

FOURTH LESSON. — CUBE.

Provide a sufficient number of inch cubes to allow each pupil to hold this form; to hold it between both hands; to feel of its sides; to count them; to notice that it will not roll like the sphere, but that it will slide on a side; that it has corners and edges; that its outside is not round like the sphere, but flat; write the name cube on the blackboard, and require the pupils to pronounce it distinctly and to spell it.

Let the pupils trace the edges around one face of the cube with a finger; then to trace the edges around other faces of it with the finger; and to notice that the edges of each face are of the same length, and that all the faces are of the same size.

Let the pupils place sticks or splints of equal lengths so as to represent the four edges of a face of the cube; then place them so as to represent two faces of the cube side by side. Write the word square on the blackboard, and teach it as the name of the shape of the face of a cube; also, as the name of the shape formed by the splints.

Let the pupils look at the edges around a face of the cube and name the position of each; as vertical, horizontal, vertical, horizontal.

Give the pupils pieces of paper of such size as may be readily wrapped around the cube. Teach them to crease the paper at each edge of the cube when wrapping it, so as to show the square shape of the faces. These squares may be cut out, placed on the several faces of the cube, and counted.

Modeling the cube. — When the necessary facilities are provided, the teacher may show the pupils how to model a cube from clay. Let a sphere be made as before, and then the opposite sides of it flattened by tapping it on the molding-board.

FIFTH LESSON. — DRAWING A SQUARE.

Place a large cube in front of the class and request the pupils to represent one face of it with splints. Then require them to hold their slates on the desk in a vertical position and to draw the four edges that bound the face of the cube. Next turn another face toward the pupils and request them to draw that in the same manner. Now they may place their slates on the desk in the position for writing, and repeat the drawing of the faces of the cube three or four times. Let the pupils also draw these faces as represented with the splints. Each face of the cube may be thus represented and drawn.

DRAWING IN PRIMARY AND GRAMMAR SCHOOLS.[1]

BY WALTER S. PERRY,

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IV.

PUPILS are not only to draw straight lines and circles with one continuous movement, but also reversed curves, ellipses, etc. If drawing from a copy, pupils should gain direction and curvature by practicing the movement carefully, as the teacher counts, upon the printed copy. This practice will be found very valuable; the pupils' attention is thus directed to every point in the curve, while the hand is acquiring the sweep and curvature of the line. The true form is registered in the muscles of the arm before the pupil begins his own drawing.

Allow the pupils to practice a line on the printed copy two or three times, and then to pass quickly to their own drawing, and, even with the eyes closed, the hand, if unrestrained, will make the same movement. When drawn, the line may not be quite right, but it will be more nearly right than if drawn in a slow, laborious way. This line freely drawn, there is placed quickly upon the paper an outline which defines the form, so that the

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[1] Copyright, 1887, by Walter S. Perry.

pupil may cut off or add on, here or there, to perfect the figure. No erasing should be done till the figure is finished, but the lines that are wrong may be marked with a very small cross, and later all lines may be erased at the same time. If a line is drawn and then immediately erased because wrong, there remains no guide for a second line. Moreover, as some pupils wish to do more erasing than others, the class cannot be kept together, the pupils are soon doing things their own way, which is not usually the right way, and, as a result, there is an absence of all uniformity in method of execution, and the value of the exercise as a class drill is lost.

LINING-IN.

It is sometimes a question just how soon children should commence to line in, or brighten, their drawings. The child wishes to make the drawing bright enough to be easily seen; and if not allowed to strengthen the figure, he will learn to sketch heavily. This should not, however, be attempted until the pupil has become thoroughly used to sketching freely and lightly. The teacher should draw upon the board an exercise from the book which has previously been sketched by pupils and which will best illustrate what is to be taught, and then proceed somewhat as follows: —

1. Erase all guide lines and all lines not necessary to the completion of the drawing. 2. Erase all points. 3. Almost wholly erase all parts of the drawing, one line at a time. 4. Brighten those lines which form the figure.

(*a*) Pupils should erase but one construction line at a time, and do that thoroughly, before giving attention to a second; they are inclined to rub all over the figure carelessly, and not to make thorough work of it. (*b*) They should make a special thing of erasing the points, as they are often made deeper and blacker than the lines. (*c*) They should make the figure faint by rubbing over *one* line at a time. (*d*) Having done all the erasing necessary, they should put the erasers away and not be allowed to use them again till the whole figure is brightened.

In teaching lining-in for the first time, the teacher should go about the room and brighten one or two lines in each book, making broad, gray lines. This takes time, but it is better for the children to line in a less number of drawings, if in doing so they can make a good beginning. The work should be done in stages, one stage being completed by all the pupils before a second is attempted; and each pupil should be able to give, in his own words, the various stages to be performed.

Many of these things may seem exceedingly simple, as though they might be learned by once doing and without special instruction; but not so. Pupils fail upon these simple things; they have to be repeated many times. Whole sets of books are often ruined because sufficient attention has not been given to details in execution. When these things are well learned, pupils may work more independently.

FORM, NOT LINES.

The pupils' attention should always be called to the whole form and to the various forms which go to make up the figure. That is, pupils are sometimes asked whether certain *lines* are right, and are unable to tell; they should be asked whether certain *forms*, or spaces enclosed by these lines, are right. Oftentimes teachers have had much trouble with certain figures because the outlines of the various forms in detail have been given in sections, and attention called to the particular line or curve instead of to the whole form of the unit. The pupil will get the line right when he perceives the whole form of the unit he is drawing. The pupils are to draw *forms*, not *lines*.

COPIES UPON THE BLACKBOARD.

It is a mistaken idea that copies of the figures in the drawing-book should be put upon the blackboard. It takes much of the teacher's time, and the results are not at all satisfactory. Children cannot keep in mind the teacher's drawing, the copy in the book, and their own drawing. Their eyes pass so quickly from one to another that they do not perceive the form they are trying to draw. Their attention is called to the work on the board, which fully one half of the pupils cannot see well, and when they draw, they draw from memory what they think they saw on the board; and often they cannot indicate in their own printed copies what they are trying to draw.

There must be concentration of thought and attention upon one good copy — that in the book; the teacher's drawing is a hindrance, and not a help.

But one may say that the copy must be made upon the board that the pupils may know the order of drawing, and that attention may be called to details. But instead of this, the teacher should first make a very rough sketch of perhaps one half the figure upon the board, and require the pupils to number the principal points upon their printed copies as the teacher numbers hers. The teacher's drawing should then be erased, and if the attention of the pupils is to be called to any particular point or line, the teacher has simply to name or to give the number of the point and require the pupils to put their pencils upon their printed copies and find points or trace lines. Thus is their attention held to one copy, and that a well-drawn copy and one that can be seen.

METHOD OF GIVING A LESSON.

Until pupils acquire good position, correct methods of work, etc., give the lessons somewhat as follows: After a careful study of the figure, the order of drawing the various construction lines, and the numbering of the principal points, the teacher may say, if a vertical line is the first to be drawn, Take position for the vertical line; that is, sit erect and directly in front of the line, and with the fingers far from the point of the pencil practice arm movement — once, twice, draw. Divide the line into two equal parts and hold the pencil on the line a moment; look again, make a point, etc.

Now, ready for the curve (perhaps from four to seven). Place pencils upon point four of the printed copy, ready to practice the curved line to seven, pencils leaning toward the right, wrists straight. Practice the printed curve, once, twice, three times; practice the movement upon the drawing to be made; draw. Observe the copy and correct with the pencil, making a little mark upon the line that is incorrect. Give all points and lines in a similar way.

When the figure is sketched and corrected with the pencil, the next direction should be to place the pencils upon the desk and to use the rubber, erasing the lines marked. When all erasing has been done, place the rubbers upon the desk and correct once more with the pencil. This done, erase once more, and erase, also, all the construction lines, one line at a time. See that the figure is of one color throughout. Lay aside rubbers. Brighten the lines, making broad, soft, gray lines.

THE FIRST PAGE IN THE BOOK.

Reference has been made to the importance of good work in the grade where books are first used. It matters much, also, how the pupils in the different grades finish the first pages in their books. If done well, they are likely to do the whole book well. If done poorly, it is almost impossible to arouse interest in the work. The first page should be well drawn and lined in by every pupil before going on with the second. Poor work is accepted too often by the regular teacher as the best the pupils can do. There is frequently a great difference as the pupils are promoted from one school to another.

A school showing the worst results in drawing one year may produce the best another. The pupils have the ability to draw, but they may not know it. They have never produced good work, and are not enough interested to try. The teacher knows the children can do other things well, but thinks they cannot draw; as though it required more of a talent to use the hand and eye than the brain. The development of the eye, the hand, and the brain should be in unison; and it is no more difficult to teach children to use the hand and eye, in other words, to draw, than to teach them to do other important things.

When the first lesson is given, means should be employed to interest the pupils. If they draw the first line well, very likely they will draw the first page well.

But we must not expect too perfect work. Perfect work is not necessarily good educational work. We must encourage every honest effort, and there will be no trouble, no lack of interest. Seeing one page well done, the pupils will try all the harder on the next; they begin to feel that they can do well. Poor work accepted by the regular teachers is accepted to the loss of both pupils and teachers. The teacher of the class doing poor work has to work harder than any other.

Every pupil can present a neat and well-finished book. Careful work will show itself, though the drawing be inaccurate. Thick, patched, heavily drawn lines cutting through the paper are not to be excused on the ground of no talent in drawing. The pupil will never become interested till he is made to do his work neatly.

THE HISTORY OF OUR COUNTRY: HOW TO TEACH IT.[1]

BY WILLIAM A. MOWRY.

I.

THE IMPORTANCE OF HISTORY.

THE study of history may well be classed among the humanities. The lamp of experience is one of the brightest and most useful guides of human action. The consideration of the upward and downward drift of the human race, the rise and fall of empires and kingdoms and peoples, not only observing carefully the sequence of events, but drawing the line clearly between cause and effect, has always been considered as furnishing the safest guide for building nations, elevating peoples, and improving our race.

It must certainly be true that the study of our own country, our own government, the beginnings of this nation, its development into one of the most powerful nations of the earth, should form an important part of the curriculum of study especially in all the public schools of the land. It is to be feared that our schools in general have not given to this important study the place which it deserves to occupy and which ought to be assigned to it if we are to succeed in maintaining our free republican institutions.

METHODS OF TEACHING.

The methods of instruction in the schools to-day differ from those employed forty years ago less, perhaps, in teaching the history of our country than any other study. The text-books have nearly all been largely after the plan of the first editions of Goodrich's History of the United States. Of late years a few new books, by distinguished, scholarly authors, have endeavored to strike out from the beaten track and present some new phases of teaching, but they have not proved in all respects successful.

Most authors have failed to grade the work to be done with reference to the age and the wants of the pupils so as to produce

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[1] Copyright, William A. Mowry, 1888.

the best results. There is much resemblance between geography and history in regard to the true philosophy of presenting them to young persons.

THREE COURSES OF STUDY.

The true philosophy of teaching will demand of history, as of geography, three courses of study in the schools.

1. The first course should be for young pupils, from eight or ten years of age to twelve, and might consist largely of supplementary reading. It should deal with graphic incidents generally relating to biography, or at least with one or more central personages in the story, and the account should be told by the most masterly word-pictures possible.

2. The second course should take these stories, already told, and weave them together so as to make one web of the whole, or, to change the figure, pick up the separate links and weld them together in one chain, strong and beautiful. This course would be adapted to boys and girls of from twelve to fourteen years of age.

3. The third course should give a fuller and more elaborate review of the leading events of the grand history of our country, stated in a philosophical order, with special reference to the logic of events, and unfolding the principles and usages of our republican government, thus preparing for citizenship. It should also show the wonderful growth and expansion of our country, its gigantic strides, its present status, its perils and its possibilities for the future.

THE THREE POSSIBLY CONDENSED TO TWO.

It may perhaps be found, in the present condition of the schools and with the courses of study now in vogue, difficult to introduce into all schools all three of these courses. In such a case the second course may be omitted, for prudential reasons, by connecting together the incidents of the first course, introducing the necessary intervening links, and lowering the third by omitting from it the more difficult and least apparent portions of the philosophy of the history, thus adapting it to the pupils of the highest class in the grammar schools.

In this way the intermediate course will be dropped out. The difficulty with this plan is that it is in a measure unnatural and empirical.

The three-course plan is according to the nature and growth of the child's mind, and is, therefore, philosophical. Moreover, it is the only plan that will in the best and most thorough manner give the young people that view of our history which will best fit them for their duties as citizens.

It is possible that the three-course system might be in most schools substantially retained, by giving both the first and second courses from well-graded supplementary readers. This could certainly be done wherever the teacher has a good mastery of the subject and is fairly skilful in tact to conduct the reading course, introducing new elements by oral instruction carried on conversationally.

FOR CITIZENSHIP.

One thing, however, should always be kept in mind throughout the entire school study of the history of our country; and that is *preparation for citizenship.* The peculiarities of our government should be dwelt upon. After passing the Revolutionary period and the establishment of the new government, it should be clearly shown that we have three distinct units of government: the town, the state, and the nation.

Patriotism should be taught from every page of our history. The hardships of the early settlers and of the founders of the republic, and the privations and sufferings of both soldiers and citizens in the time of the Revolution and in the Civil War, should be turned to good account. Loyalty to government, respect for the officers of the law, magistrates, legislators, governors, and presidents, should be insisted upon.

In few places does the teacher, or any one else, have such power to promote the future success and prosperity of our country as does the earnest and carefully trained student of history before his class in one of our public schools.

METHODS IN GEOGRAPHY.[1]

BY LARKIN DUNTON, LL.D., AND MISS L. T. MOSES.

V.

SECOND YEAR'S WORK.

THE semi-cardinal points are to be taught in the same way as the cardinal. The children are led to see that there are points between the four principal points and that it would be well to have names for the halfway points. The pupils may be led to give a good name for a point that is not north nor east, but is halfway between north and east; and so for the other halfway points the names may be given by the children. Should the children suggest that there are still other points between the cardinal and semi-cardinal points, the teacher may repeat the thirty-two points, but tell the children that the eight they already know are the only ones necessary for them now.

It now remains to apply the knowledge of these points to objects outside the room. The children are directed to think of the exact place where the sun set last night. It is better to use the sunset for this, as many of the children may not be up at sunrise. It will be well, too, to begin these lessons when the sun sets nearly in the west. The children, after thinking a moment, are directed to point to the place and think of everything they can see between the schoolhouse and the western sky. If they do not think readily and there is no western window accessible, let them look as they go home and report at the next session. Let the children tell in what direction all the houses, streets, ponds, trees, or whatever the objects may be which they have seen, are, as they name the objects. Of course only those objects are named and located which the majority of the pupils know. The other points are treated in the same way. The teacher now names certain prominent objects known to the pupils, as the nearest church, a hill, the academy, or other objects, and the pupils point to them and name their direction. Each child will be pleased at this point to show the direction in which his home lies.

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[1] Copyright, 1887, by Larkin Dunton and L. T. Moses.

The next lessons should be on the horizon. The children are told just before recess to look out of a certain window as far as they can see. They tell that they can see no farther because the sky seems to touch the ground. Now they are told to look along the line where the earth and sky seem to meet as far as they can. They can only see a little way from the window, but when they go out-of-doors they can look and see what kind of a line is made where the earth touches the sky all around. If there is a hill near the school it would be well for the teacher to take the children to it. After the circle has been seen, or enough of it for the whole to be inferred, it is named the horizon. The children will easily find the points of the compass on the horizon.

Before giving lessons on the direction of the winds, the teacher should construct a weather-vane. This can be done by constructing a standard with four arms, to the ends of which are fixed the letters N, S, E, W ; a headless bonnet-pin may be used to insert into the top of this; and a pasteboard figure of an arrow, a fish, cow, or other object may be put on top of the pin. This is a very simple vane. Many teachers make, or have made, much more solid and permanent ones. The vane must be so adjusted that the breath will blow the arrow round. The children will place it so that the letters point in the right direction.

The pupils' observation of the wind the year before will cause them to know that the wind blows in different directions. They will remember that sometimes it blows in at the windows on one side of the room, sometimes at those of the other side. The teacher blows against the vane from one of these well-known directions and the children see that the arrow turns so that it points towards the place from which the wind is blown. They then name the direction in which the arrow points, and name the wind from it. Other tests by the teacher and pupils follow, till the latter can tell that the arrow points in the direction from which the wind comes. The teacher then allows the children to set the vane in directions indicated by her and by the pupils themselves.

Now the pupils tell what objects they have seen for weather-vanes, and where vanes are usually placed. The pupils tell how they can know the direction of the wind from the vanes and how they can know it from the clouds and the rain. The pupils now resolve that they will look to see how many vanes they can find before they come to school to-morrow, and to set their own vane every morning just the way the wind is.

The children where this has been tried have not once forgotten to set their vanes every morning, and they have much enjoyed watching the clouds and the vanes together, to see if both told the same story about the wind. Before many weeks they have discovered for themselves the clouds going in different directions at the same time, and so found that there were upper currents as well as currents near the earth.

The lessons on plans for this year are a review of the last year's work and drawing the pupils' desks, the teacher's desk, and the platform, to a scale. The idea of drawing to a scale may be given in this way: The teacher takes a common pocket-knife, opens the blade, and draws a plan of it on the board not larger than the knife itself, taking pains to draw it lightly, so that it will not be well seen. The pupils complain, and, on being asked what can be done, say that they can see it if it is larger. The drawing is enlarged, but the handle is only twice, while the blade is eight or ten times, as large as the real knife. The children soon discover that the handle must be just as much larger as the blade is; and, when the teacher has drawn one or two other things out of proportion, they know that the parts of anything made larger must all be in proportion. One instance of reducing the size disproportionately will convince them that the same thing is true when things are made smaller than the real size. It has been found well to have children of the second year draw no object so large that the scale of an inch to a foot will not serve to reduce it sufficiently to draw on their slates; so the plan of the room is not drawn till another year has made them sufficiently familiar with numbers to compute to a scale in which the fraction of an inch is used.

The first exercise by the class in reducing the size of an object would be this: They draw around their reading or other books small enough to place on their slates; they then make the plan smaller by drawing a line through the center lengthwise. They readily see that the plan of the book is only half as wide, and so must be only half as long, and that they must draw another line through the middle to make the length one half. They see that they have now four plans of the book, and that each one is just one quarter as large as the book; so they rub out all but one, and finish that by drawing smoothly around it. The pupils may now be allowed to measure the large dictionary or atlas, or any other book too large to draw the full size on their slates. They are to draw this. They decide that they can draw this book one quarter as large as it is by making the sides one half as long as they really are, and they draw the book in this way. After plans of several objects are drawn with the sides one half the real length, the plans of the same and other objects may be made with the sides one quarter or one third of the real length.

The pupils are now ready to draw plans of their own desks to a scale. It is better to have them draw their own desks first, as each child gets the practice of measuring for himself in this way. Before the lesson begins, the teacher provides each child with a strip of pasteboard or wood four inches long. The pupils have their foot-rules also on their desks during the lesson. At the beginning of the lesson the children take their four-inch strips and are told that they are to be used as a measure during the lesson. To familiarize them with this they are asked to find one measure on their desks, two measures, three measures. The teacher ascertains in each case that the children do this accurately. The pupils are now ready to find how many measures there are in the length of the desk. They do this and find their desks are four and a half measures long. With the teacher's help they decide that the plans can be drawn one inch to a measure. So they draw the line for the back of the desk four and a half inches in length. The side of the desk is now measured and found to be just three measures long; so the sides are drawn three inches long. The line for the front of the desk is now drawn. The pupils are now reminded that the plan for the top of the desk should show the exact form or shape and are asked to look at the desks and then look at the plans and see if they are just alike. If the pupils do not see readily that the front corners are rounded, ask them to pass their fingers around the sides and front of the desks and call attention to the corners. The corners should now be drawn as they are on the desks.

For the teacher's desk the foot-rule is a good measure, and for the platform the measure should be two or three feet, as the teacher may decide. This work should be carefully done, as it is the foundation for the work of making and understanding maps by the pupils.

The time to be allowed for this work should be about the same as was used the first year for the work on position, three or four weeks, allowing one lesson a day. After one or two of the lessons designed for accurate and rapid observation have been given, it would be better to proceed with the work following, the lessons for training in accurate and rapid observation continuing, for five minutes each day, for a time long enough to establish a habit of seeing at a glance, and with unfailing accuracy, a group of three or four objects.

LANGUAGE LESSONS AND EXERCISES.[1]

BY L. W. RUSSELL, A.M.

VII.

THE PRONOUN.

IT is a pleasant discovery for the pupil to make the discovery that he has been using, in his common speech, a class of words several of which he might do without, but which, properly introduced, enable him to avoid disagreeable repetitions of names. It is a matter of still greater interest for him to learn that some of these words, while they take the place of names, also enable him to write his thoughts about things in a smooth, agreeable way.

Children readily adopt pronouns into their common speech, although they frequently commit errors in their use of them. These errors, if not corrected in the youth of the pupils, will persistently cling to them, even into adult life.

The employment of relative pronouns and their compounds is a thing which comes slowly to children. They need frequent and long-continued help in the matter; but the appropriate use of them is a refinement in language worth laboring for.

Although the classification of pronouns into their different kinds — personal, relative, demonstrative, etc. — is not at this stage recommended, yet the different uses which give rise to these divisions should be explained as the words are taken up.

[1] Copyright, 1887, by Eastern Educational Bureau.

TEACHING.

Show the nature and use of pronouns by substituting for them the nouns which they represent, in paragraphs taken from the school readers, and in sentences made up for the occasion.

Show the significance of the word pronoun; hence, the propriety of its application.

The first work with the pupils should be in helping them to recognize the words which belong to the general class of pronouns. In this special work the attention of the pupils should not be diverted by requiring the invention of sentences or stories, but a judicious selection should be made from the class reading-book for the needed material.

EXERCISE.

1. Let a good reader read aloud the paragraph selected.

Class read the same silently; in concert, aloud.

All examine the paragraph to select the pronouns.

First pupil begin and read, orally, until he comes to a pronoun, naming it. Tell what noun it takes the place of.

Other pupils go on, doing the same.

Continue this exercise until the selection of pronouns becomes easy.

2. Use the following list of pronouns from which to select for insertion in sentence or story writing: I, he, his, hers, they, you, mine, me, them, us, we, my, your, their, herself, himself, themselves, ourself, ourselves, yourselves.

Also use the simple relatives, and, later on, the compound relatives.

Use *this* and *these* to indicate things near, and *that* and *those* to indicate things more remote.

3. An important exercise is to fill blanks with the proper pronouns, as in the following: —

— and — will go together. — boys are going skating. I know my lesson as well as — or —. Who is that? It is —. — and — are going to the concert this evening. Is it —? No; but it is —. My brother can run faster than —; etc.

Errors are very common in such sentences: as in the first, which the pupil would be likely to fill out as follows: "Him and me will go together;" or, in another, "Us boys are going skating."

There are many applications among the uses of the pronouns which are difficult to fix correctly with learners without a thorough study of case in connection with them. Here is a point where technical grammar is of undoubted use.

Cautions. — Do not make false syntax for the sake of getting material for the pupils to correct. What they exhibit themselves will be quite enough for impressions of that kind.

Do not make children write such nonsense as follows, for the sake of material for the children to rearrange and correct: —

TELLING WHAT JOHNNY DID.

Johnny got up in the morning. Johnny dressed himself. Johnny washed Johnny's face. Johnny combed Johnny's hair. Johnny blacked Johnny's shoes. Johnny ate Johnny's breakfast. Johnny studied Johnny's lesson. Johnny went to school. Johnny did not play on the way to school. Johnny said "Good-morning" to Johnny's teacher. Johnny is a good boy.

The above is a nearly verbatim copy of a school language lesson to be corrected! Children do not write such stuff unless they are told how to do it. Let them write the best they can, and help them to do better. Keep up the "presumption of brains" with the children all the time.

COMPOSITION EXERCISE FROM PICTURES.

The teacher should make a large collection of loose pictures. They can be gathered from magazines, illustrated papers, old books, advertisements, business cards, etc. The pupils should help in the matter. A large number and a great variety can easily be secured. These will be much better for the purpose in hand than those of the class-books upon language, for each pupil can have a picture to write from different from those of all the others. The teacher can adapt the picture for each child to his particular bent of mind, and thus interest him at once. The variety in the little stories written from them will be delightful.

The teacher should talk with each pupil a little about his picture, working up his imagination by questions and suggestions. The pupils are delighted with this kind of writing when under the direction of an interested teacher. Try it.

METHODS OF TEACHING ARITHMETIC IN PRIMARY SCHOOLS.[1]

BY LARKIN DUNTON, LL.D.,

Head Master of the Boston Normal School.

XI.

SUBTRACTION.

LET the numbers 2, 3, 4, etc., to 10, be subtracted from 100 and from the successive remainders, and the exercises will be the reverse of those explained under addition; for example: —

100—7 may be thought as 10—7= 3, and 100—7=93,
93—7 „ „ 93—3=90, „ 90—4=86,
86—7 „ „ 86—6=80, „ 80—1=79,
79—7 „ „ 9—7= 2, „ 79—7=72,
72—7 „ „ 72—2=70, „ 70—5=65;

and so on till the remainder is less than seven.

If the minuend consists of tens only, the subtrahend is to be taken from 10, and the remainder added to the next ten below; for example: $100 - 7$ becomes $10 - 7 = 3$, and $90 + 3 = 93$. If the minuend consists of tens and units, and the units are more than the subtrahend, the subtrahend is to be taken from the units and the remainder added to the tens; for example: $79 - 7$ is changed to $9 - 7 = 2$ and $70 + 2 = 72$. If the minuend consists of tens and units, and the units are less than the subtrahend, the units of the minuend are to be subtracted first, and then from the tens are to be taken the difference between the units already subtracted and the subtrahend; for example: $93 - 7$ is changed to $93 - 3 = 90$, and $90 - 4 = 86$.

This shows us how important it was to teach the separation of the numbers below 10 into two parts; and also reminds us of the propriety of a careful review of the corresponding number before beginning a new exercise in subtraction. For example, before giving exercises in the subtracting of seven, the reviews should cover the following ground: —

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[1] Copyright, 1887, by Larkin Dunton.

$7=6+1$ or $1+6$,
$7=5+2$ or $2+5$,
$7=4+3$ or $3+4$; and also

10—7, 7—7, 13—7, 11—7, 9—7, 15—7,
12—7, 14—7, 8—7, 16—7, and 17—7.

In the addition of 9, the children will often reach the result by adding 10 and subtracting 1; so in subtracting 9, they will often reach the result by subtracting 10 and adding 1. Such practices should not be allowed unless they are understood; which will be the case if they are discovered by the children. But the teacher should examine and, if necessary, instruct.

It does not follow, however, that a pupil should be allowed to continue a practice in numerical computation simply because he has hit upon it and understands it. It is usually better for the teacher to train the pupils in the most expeditious methods of performing operations; and, as a rule, one method is better than two. For example, if the pupil is always required to reach results in the addition and substraction of units in the way described above, whenever he is obliged to go through a conscious process in reaching the result, he will reach the point where such operations are automatic much quicker than he will if he is allowed to reach his results now by one process and now by another.

Written exercises may be given which are easy to correct, consisting of series of subtractions. The series, 100 — 7, etc., will end with 2; for 7 in 100 = 14, and 2 remainder. The series 99 — 8 ends with 3; since 99 ÷ 8 = 12, and 3 remainder. Thus exercises may be set consisting of a dozen or more subtractions, so constructed that a glance at the final result will show whether the work is correct.

Chart XIII may be made helpful in oral drill, since 1, 2, 3, etc., may be subtracted from each number; and thus the labor of the teacher may be materially lessened.

CONNECTED ADDITION AND SUBTRACTION.

For the sake of variety, as well as for the purpose of reviewing the work of addition, series of alternate additions and subtractions may be given for written work; for example: —

$100-7=93$

$93+4=97$ $\quad$ $100-3=97$

$97-7=90$

$90+4=94$ $\quad$ $97-3=94$

$94-7=87$

$87+4=91$ $\quad$ $94-3=91$

and so on. Since subtracting 7 and adding 4 reduces a number 3, every second result must be the same as if 3 were subtracted.

$1+7=8$

$8-3=5$ $\quad$ $1+4=5$

$5+7=12$

$12-3=9$ $\quad$ $5+4=9$, etc.

Since adding 7 and subtracting 3 increases a number 4, every second result must be the same as if 4 were added.

Work of this kind is easy to assign and easy to examine. The above illustrations are designed merely as suggestions of what may be done.

So far in our treatment of numbers consisting of two places we have added and subtracted only units; but it would be a good preparation for work with numbers from 1 to 1,000 to add and subtract numbers larger than 10 at this stage. The following is suggested as a good order of work: —

(*a*) Tens to tens.	(*a*) Tens from tens.
$20+30$	$100-10$
$50+10$	$100-30$
$10+20$, etc.	$90-70$, etc.
(*b*) Tens to tens and units.	(*b*) Tens from tens and units.
$36+40$	$96-40$
$30+40=70$; so	$90-40=50$; so
$36+40=76$	$96-40=56$
(*c*) Tens and units to tens.	(*c*) Tens and units from tens.
$30+25$	$90-63$
$30+20=50$	$90-60=30$
$50+5=55$	$30-3=27$
(*d*) Tens & units to tens & units	(*d*) Tens & units from tens & units
$32+44=32+40+4$	$96-34=96-30-4$
$68+28=68+20+8$	$83-65=83-60-5$

These exercises, at least those marked *a*, *b*, and *c*, should be readily performed by the pupils orally before they are changed to written exercises. In the written work, a union of addition and subtraction may take place in the same series of exercises, as shown below: —

(1) 10+20=30
30—10=20
20+20=40
40—10=30
etc.

(2) 10+30=40
40—20=20
20+30=50
50—20=30
etc.

(3) 100—30=70
70+20=90
90—30=60
60+20=80
etc.

(4) 100—20=
+10

(5) 10+40
—20

(6) 10+50
—30

(7) 10+50
—40

(8) 100—40
+20

(9) 100—50
+30

(10) 4+40
—20

(11) 7+50
—30

(12) 9+50
—40

(13) 98—40
+20

(14) 96—50
+30

(15) 97—50
+40

(16) 10+25
—20

(17) 10+46
—30

(18) 10+38
—20

(19) 100—25
+20

(20) 100—46
+30

(21) 100—28
+20

(22) 12+24
—12

(23) 7+36
—18

(24) 1+28
—14

Similar series of numbers may be given indefinitely as the needs of the class require.

The following rules may be useful: —

To add one number between 10 and 100 to another, add first the tens and then the units; for example: 57 + 39; 57 + 30 = 87; 87 + 9 = 96.

To subtract one number betwen 10 and 100 from another, subtract first the tens and then the units; for example: 77 — 49; 77 — 40 = 37; 37 — 9 = 28.

A teacher ought to be satisfied with the weak pupils if they can solve problems in these ways, and not try to teach them shorter processes. It is better for a pupil to be certain in one way than to be uncertain in several.

It was previously shown that there was great advantage in being able to increase any fundamental number to 10; there is a like advantage in being able to increase any number below a hundred to a hundred. It is well, therefore, to drill the pupils in such exercises as these: —

86 and how many are 100? $86+4=90$; $90+10=100$; hence 14.
67 „ „ 100? $67+3=70$; $70+30=100$; „ 33.
48 „ „ 100? $48+2=50$; $50+50=100$; „ 52.

Chart XIII affords abundant matter for drill in the addition of numbers below 100; for example, in adding 48 to each number on the chart, there are 100 additions. But each other number below 100 may be added; which makes 5,000 examples in addition. Or, by how many does 53 differ from each number on Chart XIII? In answering this, the child performs 100 subtractions. But the same may be asked of all the other numbers below 100; which gives 5,000 examples in subtraction. Add 24 to each number in the first five vertical columns; in the first four horizontal lines, etc. Remember that practice makes perfect.

THE STUDY OF SYNONYMS.

SENSITIVE AND SENSIBLE.

1. Derived from the Latin.
2. Pertaining to the senses.
3. SENSITIVE means capable of feeling acutely.
   SENSIBLE means capable of perceiving.
4. She is SENSIBLE of the cold, but not SENSITIVE to it.
   When SENSIBLE refers to the action of the mind it is not synonymous with SENSITIVE.

SEWAGE AND SEWERAGE.

1. Derived from the French.
2. Both relate to sewers.
3. SEWAGE means the contents of a sewer.
   SEWERAGE means the system of sewers.
4. When the SEWERAGE of a city is well planned, no odor from the SEWAGE should escape.

AWARE AND CONSCIOUS.

1. AWARE is derived from the Anglo-Saxon, CONSCIOUS from the Latin.
2. Both [illegible] mean apprised.
3. AWARE refers to things outside of ourselves, to objects of perception. CONSCIOUS refers to our own thoughts, to things within us.
4. In the darkness he WAS AWARE of the presence of his enemy, but CONSCIOUS that he could thwart the designs of his foe.

NEGLIGENCE AND NEGLECT.

1. Derived from the Latin.
2. Their common meaning is disregard.
3. NEGLIGENCE is the habit and NEGLECT the act, of leaving things undone or unattended to. To be NEGLIGENT is a general trait of character. We are guilty of NEGLECT in particular cases.
4. By NEGLECTING to do what ought to be done, we soon acquire habits of NEGLIGENCE.

VOCATION AND AVOCATION.

1. Derived from the Latin.
2. Both refer to what occupies one's time.
3. VOCATION is applied to one's principal business, his trade or profession. AVOCATION, on the other hand, is used in connection with the smaller and more irregular affairs of life which often interfere with or interrupt the regular business or VOCATION.
4. In early life the VOCATION of Hugh Miller required him to spend long hours each day at the forge and the anvil. Yet he devoted [illegible] as much time to his chosen AVOCATION, the study of the rocks so thickly strewn around his native [illegible]. Later in life his AVOCATION became his VOCATION.

EDITORIAL.

HAPPY NEW YEAR to all subscribers to COMMON SCHOOL EDUCATION. Cordial greetings the editor desires to send to every reader, which he wishes might reach every teacher in the land.

With this number begins the second volume. The success of the first volume was greater by far than any one had reason to expect. We desire to double our subscription list during this year. If this is done it will give us the means of improving the magazine immensely by adding features to it yet possessed by no educational periodical.

Probably there never was a time when so wide and deep and abiding an interest in educational affairs among all classes was manifest throughout our broad country as at the present moment. The people are strong in their appreciation of education, and they are demanding as never before *the best*, especially in methods of instruction. Teachers' journals have improved greatly within the last ten or twenty years, and yet they are not what they will be within the next ten or twenty years. The time has not yet come when they mold and guide and lead the thought of our country, as the leading newspapers and magazines are now doing upon other topics.

But unless we are greatly deceived, the time is near when they can do this. All that is needed to produce the result is that the best thinkers, the strongest men and women, including the foremost teachers of our country, should, with as much care and after as critical and long-continued study as now characterizes the best productions of writers in other lines of periodical literature, contribute their best thought upon educational topics to these educational periodicals.

It is the purpose of the editor of COMMON SCHOOL EDUCATION to employ the best writers and to present to the common school teachers of America the most practical and philosophical treatment of all subjects connected with common school studies. Said a friend the other day: "If you can keep COMMON SCHOOL EDUCATION up to the grade which it has maintained during the year past, its entire success is assured." It will maintain the rank hitherto held and will improve upon it. Wide and far-reaching plans are already made for the coming year. We desire to call attention to our liberal "premium lists" and to invite all our present subscribers to aid themselves, their friends, and the cause of education by sending in a list of new subscribers and securing the premium which they prefer.

THE teacher should approach the subject of spelling with an enthusiasm born of knowledge and which will be reflected in the experience of the pupil. He should show the pupil that the words he is called upon to spell are not merely a dull mechanical procession which has been marshalled together for purposes of drill only. The pupil can well be made to feel that words have a life and a history.

Nor is it necessary for this purpose to resolve the exercise into a philological study.

Their careful arrangement and rearrangement in sentences, their analysis and synthesis in a simple way, and the proper encouragement from the teacher for the pupils to construct sentences of their own will effect the best possible results.

Thus the pupils are unconsciously fixing the orthography in their minds and acquiring a command of language. Thus, too, the pupil looks forward to the exercise with pleasure and catches glimpses of the possibilities of the language, and, as all revelation of the unexpected resources of a study is always a stimulus and a delight to a scholar, however young, so the widening of his horizon of knowledge increases his desire to learn.

SPELLING is largely a matter of the memory, and, as such, should receive very early attention. But there are some principles that underlie the art of spelling which should not be ignored or neglected. A few rules should become well fixed in the mind of every grammar school pupil. For example, the rule governing the doubling of the final consonant of a word on taking an additional syllable beginning with a vowel. This rule will explain that "fitted" should have two t's, while "benefited" should have but one.

Exceed, proceed, succeed,
end in -ceed; but it will puzzle teacher or pupil to find another.

So
coercion, suspicion,
end in -cion, pronounced *shun;* and it will trouble many to find another word in common use ending in this way.

Conducive, coercive,
end in -cive, while it may be that all of the other words on that page of the spelling-book end in -sive.

AT a recent teachers' institute ten common words were given to the teachers in attendance to be spelled.

No one spelled them all and no one missed them all. Twelve per cent. of these teachers spelled correctly only one word; three per cent., two words; nine per cent., three words; the same, four words; sixteen per cent., five words; the same, seven words; thirteen per cent., six words; the same, eight words; and only nine per cent. succeeded with nine words. The word *trisyllable* was spelled seven different ways, *erysipelas* eleven, and *hemorrhage* thirteen ways. The average of correct spelling by these teachers was but little over fifty per cent.

THE following are the words used in the trial indicated above:

separate, moneys,
inflammation, raisin,
trisyllable, preferring,
hemorrhage, suspicion,
erysipelas, coercive.

SOME specific attention should be given in all schools to words that are frequently misspelled. The word *which* or the word *they* may be wrongly spelled by more of your pupils than you would suppose. One good method is to have the correct spelling of these troublesome words placed on the blackboard to remain for a day or two, or longer, until by frequent observation and repeated practice the word becomes familiar in its proper dress. It seems to many that when the old-fashioned spelling school and spelling matches in schools went out of style, a good custom deserving of continuance fell into disrepute. Might it not be revived with advantage in many places?

WHAT LITTLE BERTRAM DID.

A FACT.

BY ELIZABETH PORTER GOULD.

OUR blue-eyed Bertram, six years old,
Sat on his Grandpa's knee,
Enjoying to the full the love
His Grandpa gave so free.

When looking up bewitchingly
He said — the little tease —
"Will Grandpa give me just one cent
To buy some candy, please?"

Who could resist such loveliness?
This Grandpa could not, sure.
So with a kiss he gave the cent —
Ah, how such things allure!

No sooner was the cent in hand
Than off the fair boy ran
To buy his candy, "'lasses kind,"
Or little "candy-man."

Now on his way, in scanning well
A window full of toys,
He spied a ring with big red stone,
O'erlooked by other boys.

All thought of candy was forgot.
He'd buy that ring so fine
For his new sister Rosamond —
Oh, how his eyes did shine!

How could he stop to calculate
The size of such a thing?
His only care was for the price —
Would one cent buy the ring?

Ah, yes, it would; the ring was bought.
And never girl or boy
Went tripping homeward through the streets
With greater wealth or joy.

Now was not little Bertram good
His candy to forego,
That baby sister might be sure
He truly loved her so?

HAPPY HOURS.

ARRANGED BY MRS. CAROLINE S. MORGAN.

◆

NEW YEAR'S GREETING.

A HAPPY New Year! A happy New Year!
Happy, thrice happy, to friends far and near.
Though years that are past with joy have been fraught;
Though choicest of blessings they all may have brought,
May their light pale in that of the New Year begun,
As the ray of the stars in the light of the sun!
And when ye have drained the crystal life-spring,
And drank of all joys that earth's New Years can bring,
Oh, may there begin for each well-beloved friend
A New Year so happy it never shall end. —*L. M. Rose.*

THE FLIGHT OF TIME.

CONCERT EXERCISE.

THE watch is ticking, ticking,
  Ticking the minutes away;
The minutes make up the hour,
  The hours make up the day.

The clock is striking, striking
  The hours so loud and clear;
The hours make up the day,
  And the days make up the year.

The bell is tolling, tolling
  For one whose day is done;
To where time is no longer
  That weary soul is gone.

And soon 't will toll for me;
And then my home will be
  Where the watch ticks no more,
  And the clock strikes no more,
    And there 's no more time for me. — *Selected.*

A ROYAL AUTHOR.

(An exhibition exercise for half a dozen boys and girls, three of each, of the grammar grade.)

First and largest girl. Far away in the little kingdom of Roumania, a brave little kingdom which for many, many years belonged to Turkey, but was finally plucky enough to fight for, and at last win, its own independence, there rules a gracious queen whom all her subjects love devotedly.

First boy. "Oh, I know whom you mean, — 'Carmen Sylva.' I have read about her in the Youth's Companion."

First girl. "Yes, I mean 'Carmen Sylva,' as she signs herself when she writes, but her real name is Elizabeth, and I want to tell you something about her. She has not always lived in Roumania, for she was born in Germany, and lived in a great castle in Prussia. Her father was a prince and a very highly educated man. He was a great student, and his daughter loved to be with him and share his pursuits."

First boy. "I have read that she did not care much about being the child of a prince, but that she liked to run around and play with other children."

First girl. "That is so, and even when she was very little she loved to help the poor and sick. But by-and-by she did the way that other girls do, and left her dear old father to be lonely without her bright presence, and went far away with her husband, the king of Roumania, to his plucky little kingdom. There she still lives and is so good and lovely, so kind to every one, and so simple in her ways that she is loved and admired by all."

First boy. "I think I have read that her people call her by a pet name which means 'Little Mother.'"

First girl. "They have given her that name because she is so interested in all that interests them, and knows so much about how they live, what they do, and what they need. She has founded hospitals, soup-kitchens, industrial schools, and orphan asylums for the poor and needy, and is always looking out for their necessities. But besides all this, she is very talented and intellectual, and has written several books. She also has the heart and soul of a poet, and knows how to put her beautiful thoughts into beautiful words. She has lately written some charming little poems called 'Songs of Toil,' all about different kinds of work." Addressing first boy by name: —

"——, will you please recite for us the [1] Song of the Boatman?"

(First boy.)

"Down stream 't is all by moonlight,
  Up stream at blazing noon;
Down stream upon the ripples,
  Up stream through sandy dune.
Down stream the helm held loosely,
  A pipe between the lips;
Up stream, like beast one straineth
  And galls the breast and hips.

---

[1] We are indebted for these songs and their translations to The Independent of November 24, 1887.

What boots it that I seem like
  The river's king to-day,
If to-morrow like a beggar,
  Despised I tug away?
My pleasuring leaves no furrow
  Upon the water plain;
The marks of struggling footsteps
  Long in the sand remain."

"Thank you. Now, ——," addressing the second girl, "will you repeat the Rope Maker's Song?"

(Second girl.)

"I, like the spiders a-spinning,
  My hemp play out;
But I work with the dinning
  Of wheels about.
My cords, like webs toward heaven,
  Shall stand sublime;
Yet there in tempests even
  Shall sailors climb.

And there they 'll hover and quiver,
  Nor mind the roar;
And there they 'll pray and shiver
  By death's cold shore.
They 'll laugh and scoff at the booming
  Made by the sea;
The dread of hunger consuming
  Poor wretched me."

First girl. "There is another very pretty one, the Song of the Diamond Polisher;" addressing the second boy: "——, we would like to have you give us that."

(Second boy.)

"These thirty years upon a wheel
  I sink the stone in lead,
Till finest cuts at last reveal
  The deep fire's golden-red.
Those flames from out the earth's abyss,
  No one can imitate;
The flames, that beauty's eyelids kiss,
  Are fanned by love or hate.

Mysteriously on me, who hang
  Spell-bound, the colors shine;
For rayless from the earth it sprang.
  The magic art is mine
Through which the mistresses of thrones
  Are dazzlingly arrayed;
But, noble dames, the purest stones
  Of soot and dust are made!"

First girl. "Thank you, and, ——," addressing the third girl, "we want to hear from you the Song of the Paper Maker."

(Third girl.)

"Those pieces of rags be quick and bring!
Those dirty old shreds are just the thing
For pulp, for pulp to record life's wrong,
For pulp, for pulp for a poet's song.

It comes out smooth and glossy and thin,
From rollers' and wheels' and cylinders' din,
For lords and ladies their notes to indite;
For petty poets, who scrawl by night,

And newspaper scribblers who bluster and blow;
For little love letters where compliments grow;
And stories in which the afflictions of men
Are wretchedly told by an unskilled pen
On just such rags as once wiped away
The tears whereat thou weepest to-day."

First girl. "I like that one about as well as any, but there is one more that I would like to have —— repeat: and *that*," addressing the third boy, "is the Song of the Stone Cutter."

(Third boy.)

"We hammer, hammer, hammer, on and on!
  Day out, day in, throughout the year,
  In blazing heat and tempests drear;
  God's house we slowly heavenward rear,
We'll never see it done!

We hammer, hammer, hammer, might and main.
  The sun torments, the raindrops prick,
  Our eyes grow blind with dust so thick;
  Our name in dust, too, fadeth quick,
No glory and no gain!

We hammer, hammer, hammer ever on.
  O blessed God on heaven's throne,
  Dost thou take care of every stone,
  And leave the toiling poor alone
Whom no one looks upon?"

First girl. "There are a number more of these pretty little poems — the songs of the Painter, the Butcher, the Glass Blower, etc., which show us how well this queen knows how to use her pen."

First boy. "She knows how to be very brave too; for once during the time of war, she went right on to the battlefield and into the hospitals, and did so much for the poor, suffering soldiers that the people of Roumania built a great monument in one of their large cities, Bucharest, to make known to the world how brave and generous she was and how they loved and appreciated her.

"I think it would be pleasant for us to recite together the Song of the Potter."

(In concert.)

**Round thou art wending!
Never an ending!
    Twirl on!
No time wasting,
Ever hasting,
    Whirl on!
Under treading,
Over kneading —
    Twirl on!
Never dare weary,
Always be cheery,
    Whirl on!
Though we may make it,
Some one will break it —
    Twirl on!
Though it drinks never,
Thirsteth it ever —
    Whirl on!**

**Thee shall she carry
Springward, and tarry —
    Twirl on!
Lipping with kisses
Ware such as this is —
    Whirl on!
Till we just take it,
Jealous, and break it —
    Twirl on!
Gladly we 'd sell her
All, then tell her —
    Whirl on!
This for a kiss, now,
Those three for this, now,
    Twirl on!
And for this other
Must she just smother —
    Whirl on!**

EXAMINATION QUESTIONS.

CIVIL GOVERNMENT.

1. When, under what circumstances, and for what purpose were the Articles of Confederation adopted?

2. What defects in the Articles of Confederation, as a bond of union between the States, were remedied in the Constitution?

3. Outline the powers and duties of the President of the United States. Of the Vice-President.

4. Where must all bills for raising revenue originate?

5. Where is the power of making treaties vested?

6. Where must impeachments originate? Where are they tried?

7. How may war be declared? Who is commander-in-chief of the army and navy?

8. What is a copyright? A patent-right? By whom are they granted? For what reasons are they granted?

9. Why are the separate States prohibited from laying duties on imports and exports?

10. Mention five important rights secured to the separate States.

GEOGRAPHY.

1. State the direction of the great mountain systems of the Western continent. Of the Eastern.

2. Where are the great plains of the Western continent? Where those of the Eastern?

3. Name and locate the sections into which North America is divided by her mountain systems.

4. State the object of Arctic explorations. What results?

5. What valuable articles of commerce are obtained from the Arctic regions.

6. Name the principal gulfs and bays of North America.

7. Describe the Atlantic slope.

8. Name the productions of the southern, central, and northern sections of the United States.

9. State the facts in regard to education in the United States.

10. Give the area and population of United States at close of Revolutionary war. What is it now?

HISTORY.

1. Describe briefly the Indian (1) as to his education, (2) domestic life, (3) disposition.

2. Name the European nations specially active in making explorations in America.

3. Select one explorer from each of these European nations and state definitely what he did.

4. Name the permanent settlements made in America during the first twenty years of the seventeenth century. By whom made.

5. Contrast the early settlers of Virginia with those of Massachusetts.

6. What was the object of King Philip in making war upon the English? His plan? The result?

7. Name the events suggested by the following dates: 1492; 1541; 1619; 1620; 1630.

8. State the motive that led to the settlement of Pennsylvania, Maryland, Georgia. Name a person prominently connected with each.

9. State the circumstances connected with the settlement of Rhode Island.

10. What places did the English specially try to capture in the French and Indian War?

ARITHMETIC.

1. What will twelve yards of ribbon cost at 62 1-2 cents a yard?

2. How many jackknives at 10 shillings a dozen can be bought for £3?

3. What will it cost to ride 25 miles at $16\frac{2}{3}$ cents a mile?

4. How long a rope will be required to go around a garden 22 rods by 14 rods?

5. At 4 dollars an acre, what will $5\frac{3}{11}$ acres of land cost?

6. A man saves 7 shillings a week; how long will it take him to save £7?

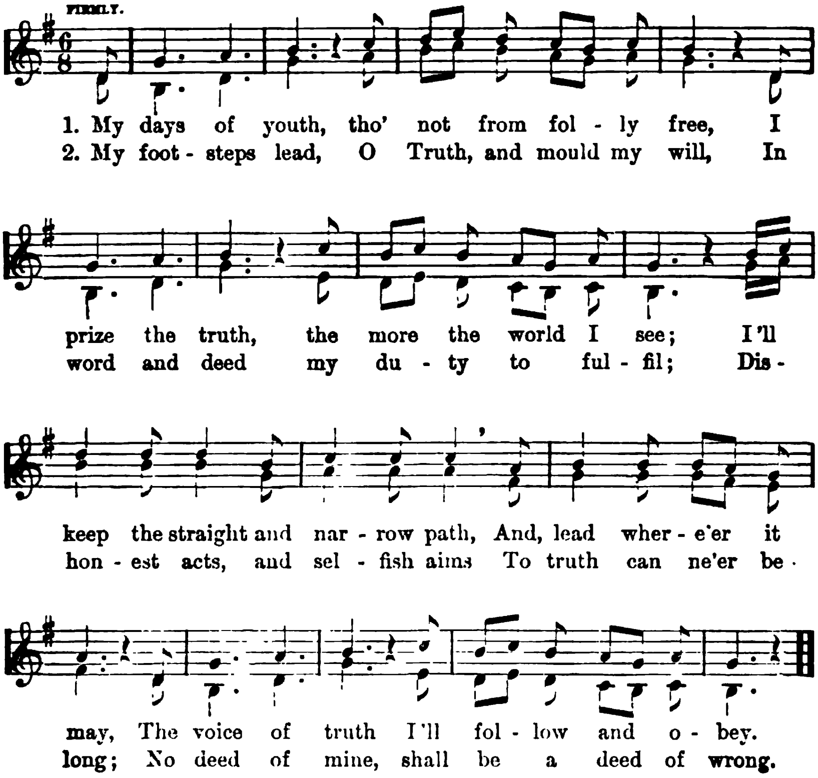
7. A can mow 12 tons of hay in 4 days; B can mow 5 tons as often as A mows 3; how many can B mow in 4 days?

8. A boy having 35 cents gave $\frac{4}{7}$ of them for peaches at 2 cents each; how many did he buy?

9. A man having 27 cords of wood sold $\frac{5}{9}$ of it for 60 dollars; what did he receive per cord?

10. If twelve men can do a piece of work in 4 days, how many men can do twice as much in 3 days?

LOVE OF TRUTH.


FIRMLY.
1. My days of youth, tho' not from fol - ly free, I
2. My foot - steps lead, O Truth, and mould my will, In
prize the truth, the more the world I see; I'll
word and deed my du - ty to ful - fil; Dis -
keep the straight and nar - row path, And, lead wher - e'er it
hon - est acts, and sel - fish aims To truth can ne'er be -
may, The voice of truth I'll fol - low and o - bey.
long; No deed of mine, shall be a deed of wrong.

3 The strength of youth, we soon see it decay,
But strong is truth, and stronger ev'ry day,
Though falsehood seem a mighty pow'r
Which we in vain assail,
The power of truth will in the end prevail.

4 My days of youth, tho' not from folly free,
I prize the truth, the more the world I see;
I 'll keep the straight and narrow path,
And, lead where'er it may,
The voice of truth I 'll follow and obey.

[This song, words and music, is taken, by the courtesy of the publishers, Messrs. Ginn & Company, from *The New Second National Music Reader*.]

BOOK NOTICES.

HOW TO WRITE LETTERS. By J. Willis Westlake, A.M., Professor of English Literature in the State Normal School, Millersville, Pa. Philadelphia: Sower, Potts & Co. 1887. Pp. 264.

A capital book for the purpose. One of the very best treatises upon this subject ever offered to the public. Most advocates of an international copyright law vaguely suppose that all the piracy done by publishers is chargeable to our side of the water. Such, however, is not the fact, as the history of this book testifies. It has been republished by a London firm, changing American cities, streets, names, etc., so as to Anglicize it. This fact is a stronger testimony to the quality of the book than to the high character of the London firm.

THREE GOOD GIANTS, whose famous deeds are recorded in the Ancient Chronicles of François Rabelais. Compiled from the French by John Dimitry, A.M. Boston: Ticknor & Co. 1888. Pp. 246.

It is a novelty, to say the least, to entrust to children a translation from the works of Rabelais. However, Mr. Dimitry claims to have freed it from all objectionable matter. As far as we know, this is the first story of what could properly be called good giants that has ever been put into the hands of children. The one hundred and seventy-five illustrations by Gustave Doré and Anton Robida make a great addition to the book. Doubtless, most children will be delighted with it.

ACTS AND ANECDOTES OF AUTHORS. By Charles M. Barrows. Boston: New England Publishing Co. Pp. 480. Price, $1.50.

A collection of facts for every reader about prominent American books, authors, and publishers; English books and authors; popular translations; dramas, operas, etc. Hundreds of prominent American and English books are here treated in a discriminating, sketchy, enjoyable way; so the reader can see at a glance what the book is, who was its author, when written, and all the authentic incidents connected with it. The acts and anecdotes of authors themselves are of much greater value even than those pertaining to books. The book is alphabetically arranged, so that the reader can turn to any author, book, or publisher, as he would to a word in the dictionary. The book is unique, complete, reliable, fresh, and entertaining, and it would seem as if every teacher, student, ordinary reader, or parent would need it. It fills a long-felt want.

COMMON SCHOOL LITERATURE. By J. Willis Westlake, A.M. Philadelphia: Sower, Potts & Co.

This valuable little book aims to give just such and so much information as is indispensable to the learner; to show the growth of our literature through its various eras; to present a concise view of the lives and characters of its great representative authors; and to bring forth from the thought treasures of our language a variety of literary gems for the enrichment of the mind of the student. The book does all this and is still a "thin text-book." There seems to be a demand for memory gems. This little work furnishes many beautiful ones.

THE PRACTICAL QUESTION BOOK. A hand-book of six thousand questions and answers. By Lamont Stilwell. Boston and New York: The Educational Publishing Company. 1887. 400 pp. $1.50.

This book is designed to present to the teacher a general summary, by question and answer, of the whole round of school studies, such as history, geography, arithmetic, writing, grammar, rhetoric, civil government, natural philosophy, etc. In carrying out this plan it gives, for example, in United States history 292 questions; then follow the answers to these questions. These answers are generally quotations, sometimes condensed, from various histories in common use and from other sources, the quotation being indicated with reference to book and page. In a similar way, there are found 200 questions upon geography, followed by the 200 answers properly quoted.

In the publisher's note the names of the books and the addresses of their authors are given. This will be of great service to all teachers.

The book is a marvel of industry and will be found of great use by all teachers of the subject treated.

GRAMMAR SCHOOL FRIDAYS. Compiled by S. R. Winchell, and published by the Interstate Publishing Co. Price, 35 cents.

This is a collection of 182 pages of compositions in prose and verse which have been chosen from their fitness for recitation on the school platform. They are selections from the best authors, and seem to be worthy of more than ordinary commendation because of their uniform excellence and purity and their peculiar fitness for school recitations.

THE "HOW I WAS EDUCATED" PAPERS. New York: D. Appleton & Co. Price, 30 cents.

These papers are taken from The Forum magazine, and are from the following authors: Edward E. Hale, Thomas Wentworth Higginson, F. A. P. Barnard, President of Columbia College, John H. Vincent, Chancellor of Chautauqua University, Professor William T. Harris, S. C. Bartlett, President of Dartmouth College, J. R. Kendrick, formerly President of Vassar College, Timothy Dwight, President of Yale College, E. G. Robinson, President of Brown University, James B. Angell, President of the University of Michigan, Andrew D. White, formerly President of Cornell University. These papers are of great value, and should be in the hands of every well-educated person.

INTRODUCTORY STEPS IN SCIENCE. By Paul Bert, Member of the Institute, and ex-minister of instruction of France. Translated by Marc F. Vallette, LL.D., Principal Grammar School, No. 31, Brooklyn, N. Y. Revised and enlarged by John Mickleborough, PH.D., Principal Grammar School, No. 9, Brooklyn, N. Y., and formerly Principal Normal School, Cincinnati, Ohio. D. Appleton & Co. 363 pp. Parts I, II, III (one volume). Introduction price, 48 cents. Parts IV, V, VI, VII (one volume). Introduction price, 48 cents. Seven parts (complete in one volume). Introduction price, 90 cents.

Over half a million copies of the original book, by M. Paul Bert, were sold in France within three years, and in the preparation of this volume such changes have been made as were required to adapt it to the wants of American schools.

The editors have evidently endeavored to make the text clear and intelligible to the young mind, adhering to the language of the author when possible to do so, but making additions here and there to suit the age and country, and putting in the mouths of the pupils such questions as their long experience in the school-room has taught them would naturally be asked by the grade of children for whom the work is intended.

Where unfamiliar words or expressions occur, the meaning is annexed in brackets, to economize time for the teacher. The style is simply conversational, nothing more.

The illustrations are new and excellent, evidently prepared with great care. In the natural history, wherever possible, American species have been substituted for foreign ones, and in the chapter on Rock Formations, that portion which treats of the continental development of North America has been substituted for the author's geological history of France. The book will prove of great value, and will doubtless be sold by the hundred thousands.

THE PUBLIC SCHOOL GEOGRAPHY. Authorized for use in the public schools, high schools, and college institutes of Ontario, by the Department of Education. Toronto: Canada Publishing Co. 164 pp. Small quarto.

Our neighbors across the border have struck out in a new path by the publication of this new geography. There is no doubt that geography is one of the most difficult branches of study in our common school curriculum. There have been many attempts to simplify the method of teaching, to improve the style of text-books, and to awake a new and living interest in this important subject. Most of these attempts have, however, been attended with but partial success.

The book before us is entirely new and executed upon a novel plan. The author designs to have the whole of the matter presented to the pupils by the teacher, not in a series of categorical statements to be accepted by the pupils without explanation, but almost entirely in a series of conversations consisting largely of questions by the teacher, and replies by the pupils. These questions are not, however, upon what the pupil has committed by rote from the text-book, but upon what he has obtained for himself. he may not know how, from the use of his eyes and ears and brain ever since he began to observe and think.

The conversations. the author intends, should consist largely of voluntary statements, which the pupils should be encouraged to offer, based on their own reading and research. The book as a whole is designed to cover the entire range of geographical study. It begins with very simple matter connected with the school-room and its surroundings, the district and township, advancing them from the home and town to the surrounding country, and so outward. There are but few questions, indeed but few map questions, in the entire book, but the various topics treated, which are given with more or less brevity, are evidently designed to be read, discussed, thought of, and reflected upon.

The treatment of Ontario and Canada is fuller by far than is to be found in the text-books of our schools. The study of this part of the book is of especial value to the teachers in the States, inasmuch as most of us have very erroneous ideas of that country. These chapters are therefore commended to the careful examination of all teachers of geography who desire to be thoroughly posted, and not to be teaching error.

It is safe to say that there is more new material of great importance in this book than has appeared in any text-book of geography for a long time. It seems to be carefully prepared, and the matter thoroughly thought out by the author before writing. The maps, illustrations, and general mechanical execution of the book are far inferior to the best text-books of the kind recently published in our country. We recommend the material of this book to the careful study of our teachers of geography, and especially to geography makers.

INTERMEDIATE FRIDAYS. Compiled by S. R. Winchell. Chicago and Boston: Interstate Publishing Co. Price, 35 cents.

Choice selections for recitations by boys and girls from eight to twelve years of age. Children, parents, and teachers can confidently turn to this volume to find what is both wholesome and entertaining for boys and girls in intermediate and grammar school grades of schools.

OUTLINES OF ENGLISH GRAMMAR. By William G. Williams, LL.D. Delaware, Ohio.

One of the striking features of this valuable little book is the style of illustrations. He has drawn his illustrations from the actual stores of our literature, instead of extemporizing them. The book has many original features showing the hand of a master. It will amply repay a careful perusal.

A PURITAN LOVER. By Mrs. Laura C. S. Fessenden (Laura C. S. Dayton), author of "Every Day People," "The Faith of the Albigenses," etc. Rand, McNally & Co. Monroe Street, Chicago, and Broadway, New York. Pp. 220.

A very bright and interesting novel descriptive of the Puritan days. The characters are well depicted, though possibly of a type not particularly common. They will be recognized as belonging to every community and age, and are the people who give life to many small communities. The book is written in a fascinating style, and will undoubtedly become popular.

ROUND TOP AND SQUARE TOP; or, The Gates Twins. By Josephine R. Baker. Boston and Chicago: Congregational Sunday-School and Publishing Society. Pp. 343. Price, $1.25.

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LAKE VIEW SERIES. Six volumes. By Anna F. Burnham. Boston and Chicago: Congregational Sunday-School and Publishing Society. Price, $2.25.

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THE OUTLINE OF NATURAL PHILOSOPHY FOR SCHOOLS. By J. D. Everett, D.C.L., F.R.S. 216 engravings. New York: D. Appleton & Co. 1887. 335 pp.

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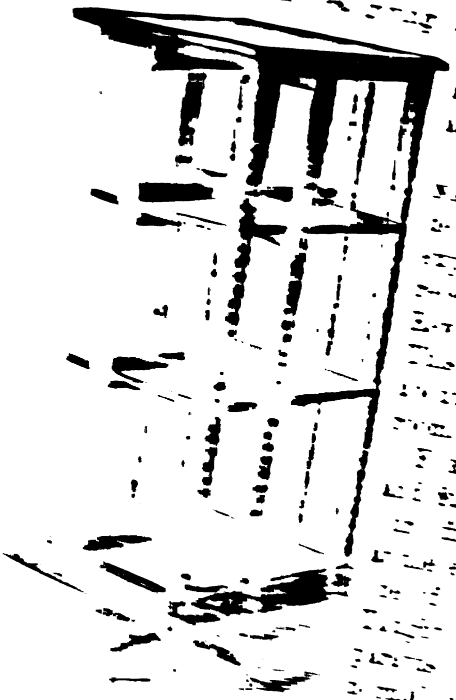

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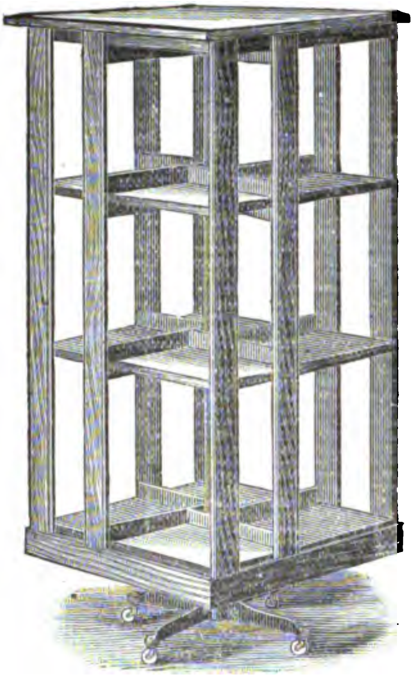

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COMMON SCHOOL EDUCATION,

DEVOTED TO THE ART OF INSTRUCTION.

VOL. II. FEBRUARY, 1888. No. 2.

ALSO A LANGUAGE LESSON.

BY L. R. KLEMM, PH.D., HAMILTON, OHIO.

LANGUAGE lessons should be conducted according to the principle that the pupil will learn the language correctly by habituating himself to it by correct use. Therefore little stories should be told, repeated, and then reproduced on paper; incidents narrated and treated likewise. Copying from the reader and dictation lessons, and all the various devices so earnestly and convincingly urged by our successful teachers, have done, and are doing still, a vast deal of good. The great number of young writers for newspapers and periodicals, juvenile and otherwise, prove that the revival inaugurated some twenty-five years ago has had excellent results.

It becomes more and more known and understood that a child should first learn to think in a language before he is called upon to think about it; in other words, that he should first learn to express his thoughts and those of others in good language, acquired by habit, before he is set to learn grammar rules and to philosophize over the structure of sentences or to prattle about numeral adjectives and correlative conjunctions and similar matters.

In the following lines I wish to exhibit a kind of language exercises which has been in use in the intermediate grades of the cities of Cincinnati and Hamilton. I know of nothing which so nicely combines thought-production with thought-expression. It is well known that many of our language lessons resemble the nibbling at the shell of the nut; in many cases pupils do not get at the kernel; that is, the thought. Now if a lesson is both thought-awakening and thought-expressing it must certainly be preferable to others in which the expression of thought is the only aim. Let me call the exercise Synonyms and Autonyms.

Dictate to the pupils a number of verbs (or, for that matter, adjectives or nouns) and urge them to find words which express almost the same thing; then let them find their diametrical opposites, as, for instance, in nouns: love, *syn.*, affection; *aut.*, hatred. Or, in the case of an adjective: brave, *syn.*, courageous, bold; *aut.*, cowardly, timid. The following examples may be of use to teachers as they have been of use to me.

Concur: to agree; to unite in opinion.
Syn. — Agree, unite, approve.
Aut. — Differ, diverge, dissent.

Deduce: to lead from; to take away.
Syn. — Infer, conclude, draw from.
Aut. — Predict, foresee, premise.

Confer: to talk together; to give as a favor.
Syn. — Bestow, counsel, converse.
Aut. — Withhold, betray.

Defer: to put off; to yield to the wishes of another.
Syn. — Delay, postpone, yield.
Aut. — Hasten, anticipate, resist.

Dejected: cast down; low in spirit.
Syn. — Discouraged, disheartened, gloomy.
Aut. — Elated, inspirited, cheerful.

Delude: to lead from truth; to deceive.
Syn. — Mislead, snare, cheat.
Aut. — Guide, deliver, enlighten.

Majestic: of imposing grandeur.
Syn. — Grand, splendid, sublime.
Aut. — Petty, dull, ridiculous.

Announce: to tell; to give public notice.
Syn. — Publish, proclaim, herald.
Aut. — Conceal, disclaim.

Renounce: to declare against; to cast off.
Syn. — Disown, abandon, recant.
Aut. — Acknowledge, cherish, adhere.

Compel: to drive with force; to constrain.
Syn. — Oblige, coerce, drive.
Aut. — Release, persuade, coax.

Repel: to drive back.
Syn. — Repulse, refuse, reject.
Aut. — Attract, accept, choose.

Proscribe: to decry in writing; to outlaw.
Syn. — Prohibit, denounce, condemn.
Aut. — Enjoin, endorse, sanction.

Retract: to draw or take back; to recall.
Syn. — Withdraw, revoke, recant.
Aut. — Offer, renew, repeat.

Contract: to draw together; to bring on; to make a bargain for.
Syn. — Lessen, incur, agree.
Aut. — Enlarge, avoid, oppose.

SOME MORE ENGLISH. — Cork is obtained principally in the southern part of Ireland.

A passive verb denotes something that is past.

Linen is bleached in two ways; one is by making it up into dresses, the other by making it into other materials.

"Did n't you say," said a seventeen-year-old miss to her teacher in physiology, "that to have your foot asleep meant a spontaneous combustion of the diaphragm?"

SCHOOL-ROOM WORK—HOW—WHY.[1]

BY N. A. CALKINS.

II.

OBJECT-TEACHING.—FORM.

NEW lessons in *form* should be presented in such order that the facts learned in the preceding lessons will lead to a knowledge of the facts in the new lesson. The manner of proceeding with new objects should lead the pupils to observe *resemblances* and *differences*. By means of comparison the pupils notice that an object is like something already known, and thus they are led to their first knowledge of the new object. When they compare it with the one previously known, and notice that *all of it is not like* the one with which it is compared, then they observe the differences. The *knowing begins* through noticed resemblances, and is continued through observed differences. By means of resemblances the child learns to know and *to group objects;* by means of differences he learns to distinguish and *to separate objects*.

In the lessons previously given on this subject those on *lines* and the *square* have prepared the pupils for observing the point where the lines of the square meet, as the *corners* of the square. From the lines and the square it is proper to proceed with a lesson on *angles*.

SIXTH LESSON.—RIGHT ANGLE.

Give the pupils *sticks* of equal length and direct them to place four of the sticks in positions to represent the sides of the square, taking care that the ends of the sticks meet properly. Request them to tell what they would call the place where the two sticks meet; also, how many corners they have made with the four sticks. Lead them to notice the *square*, and to tell how many corners it has. Request them to give a *name* for a corner of the square. Proceed to show on the blackboard that two lines meeting as their sticks do form a *square corner*. Request them to point out square corners on objects in the class-room, and also to represent square corners by moving the forefinger through the air, first vertically, then horizontally. Let them also draw square corners on their slates.

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[1] Copyright, 1887, by N. A. Calkins.

Proceed to teach the term *angle* as another name for *corner*. Write the word *angle* on the blackboard and require the pupils to spell it. They may now be required to point out *angles* on the square and in other objects, and also to represent the angle in the air.

The pupils may be told that when we use the new name for the square corner we must put another word with *angle* to represent the word square, and say *right angle*, when we mean a corner like those of a square. Place the words *right angle* on the blackboard and require the pupils to spell them; to represent right angles in the air; to point out right angles in objects; to draw right angles on their slates.

SEVENTH LESSON. — OBLONG.

Cut pieces of paper *two inches square*, and other pieces *two by four inches*, and give each pupil one paper of each shape. Request them to compare the two pieces of paper; to notice the angles and the sides of each, and to tell what they find alike in each shape; also, what differences they see.

Give the pupils *sticks* of two lengths — two inches and four inches — and request them to place the sticks so as to represent the shape of each piece of paper. When the pupils have duly observed that the *square paper* has four equal sides, and that the other one has two equal short sides and two equal long sides, teach them the term *oblong* as the name of the form with the long sides. Write the word on the blackboard and require the pupils to spell it.

Direct the pupils to name objects in the class-room and elsewhere that have *oblong* shapes, then to draw one square and two oblongs on their slates. Let them also represent squares and oblongs by moving the forefinger in the air.

Folding Squares and Oblongs. — Teach the pupils to fold the square paper, placing the opposite sides together evenly, and pressing the fold so as to *crease* it, and to tell what shape has been formed by the folding. Teach them to place the two short sides of the oblong together evenly, to press the fold so as to crease it, and to tell what shape has been made. Let the pupils fold each piece of paper again so as to form squares and oblongs. Request them to count the *right angles* on each square and on each oblong, and to tell how many angles each form has.

EIGHTH LESSON. — SQUARE PRISM.

Place *cubes* and *square prisms* before the pupils and request them to observe whether they can find like shapes on both, and to name the shapes that are alike in each; also, to tell how many of the like shapes each form has. Let them tell what shape one form has that cannot be found on the other, and how many of the shape named there are on the form.

Let the pupils *compare the edges* of the two forms, notice how many edges are of the same shape and length, and how many long edges they find. Teach the term *face* as the name for each part which has edges around it. Request the pupils to count all the faces on each; to count the faces of each shape; to tell how many *square faces* each has, and how many *oblong faces* one has.

Teach the term *square-prism* as the name for the form with four oblong faces and two square faces. Write it on the blackboard and require the pupils to spell it. Lead the pupils to observe that the prism will *stand* on either of its ends; that it will slide on a side like a cube.

Making a Prism. — Take pieces of paper as wide as the prism is long, and long enough to extend once and a quarter around it, and teach the pupils to wrap the paper around the prism, creasing it at the edges; then, on removing the paper, to fold and hold it with thumb and finger so as to represent the outside of the square prism. Lead the pupils to observe that *the side faces* of this paper prism are *oblongs* and the ends *squares.*

Surface. — Teach the term *surface* as the name of the entire outside of the *sphere*, of the *cube*, of the *prism*, and of other forms; and teach the term *face* as the name for a distinct part of the surface; also, that *all the faces of a solid* taken together comprise the entire surface of the solid.

NINTH LESSON. — CYLINDER.

Place before the pupils *spheres*, *square prisms*, and *cylinders.* Lead them to observe characteristics of each: that two of these forms will *roll*, one every way, the other only forward and backward;

that two of them will *stand*, both on either end; that one is *round every way;* that another is *round only one way;* that one has flat, *square faces* and *oblong faces;* that another has two *flat round faces;* that another has *no flat face;* that all the *edges of one are straight;* that the *edges* of the *one* with two round faces *are curved;* that the part between these flat faces is *curved evenly one way;* that the sphere is curved evenly every way. Teach the term *curved* for that which is evenly bent, and represent it with a bent string or wire, with curved lines on the blackboard, and with a line drawn around a sphere. Let the pupils represent curved lines by moving the finger in the air, also by drawing lines on their slates. Teach the term *cylinder.*

Lead the pupils to examine each of the *solid* forms which have been introduced in the preceding lessons, to observe the following facts in relation to them, and to state the facts: —

A *sphere* is a solid with one evenly curved surface not divided into parts.

A *cylinder* is a solid the surface of which is divided into three parts: two opposite, equal, circular, plane faces, and one curved face.

A *cube* is a solid the surface of which is divided into six equal, square, plane faces.

A *square prism* is a solid the surface of which is divided into six plane faces, two of which are equal squares, and four are equal oblongs.

SPELLING.

JAMES A. PAGE, the veteran teacher at the Dwight School, Boston, used to write the following lists on the blackboard, to straighten out the *ie* and *ei:* —

Believe,
Besiege,
Relieve,
Reprieve,
Retrieve;

Conceive,
Deceive,
Perceive,
and
Receive.

THE HISTORY OF OUR COUNTRY: HOW TO TEACH IT.[1]

BY WILLIAM A. MOWRY.

II.

AN ILLUSTRATIVE LESSON.

HAWTHORNE'S little book of "True Stories from New England History," entitled "Grandfather's Chair," is full of incidents concerning our early history, told in a very graphic manner, which are in every way well adapted for school use. Let us suppose a class of children ranging anywhere between ten and fourteen years of age. The teacher may read to them from the eighth chapter, how in the early twilight of Thanksgiving Eve the children stood hand in hand in a semicircle round grandfather's chair. As the British poet Young has said: —

How sad a sight is human happiness!

The enjoyment of this Thanksgiving occasion induces the grandfather, by way of contrast, to tell the children stories of the Acadians. In plain and simple language Hawthorne has pictured that sad scene in American history. The following is a portion of this account: —

> The Acadians were about seven thousand in number. A considerable part of them were made prisoners and transported to the English colonies. All their dwellings and churches were burned, their cattle were killed, and the whole country was laid waste, so that none of them might find shelter or food in their old homes after the departure of the English. One thousand of the prisoners were sent to Massachusetts, and Grandfather allowed his fancy to follow them thither and tried to give his auditors an idea of their situation.
>
> We shall call this passage the story of
>
> THE ACADIAN EXILES.
>
> A sad day it was for the poor Acadians when the armed soldiers drove them, at the point of the bayonet, down to the seashore. Very sad were they, likewise, while tossing upon the ocean in the crowded

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[1] Copyright, 1888, by William A. Mowry.

transport vessels. But methinks it must have been sadder still when they were landed on the Long Wharf in Boston, and left to themselves on a foreign strand.

Then probably they huddled together and looked into one another's faces for the comfort which was not there. Hitherto they had been confined on board of separate vessels, so that they could not tell whether their relatives and friends were prisoners along with them. But now, at least, they could tell that many had been left behind or transported to other regions.

Now a desolate wife might be heard calling for her husband. He, alas! had gone, she knew not whither; or perhaps had fled into the woods of Acadia, and had now returned to weep over the ashes of their dwelling.

An aged widow was crying out in a querulous, lamentable tone for her son, whose affectionate toil had supported her for many a year. He was not in the crowd of exiles; and what could this aged widow do but sink down and die? Young men and maidens, whose hearts had been torn asunder by separation, had hoped, during the voyage, to meet their beloved ones at its close. Now they began to feel that they were separated forever. And perhaps a lonesome little girl, a golden-haired child of five years old, the very picture of our little Alice, was weeping and wailing for her mother, and found not a soul to give her a kind word.

Oh, how many broken bonds of affection were here! Country lost, friends lost — their rural wealth of cottage, field, and herds all lost together! Every tie between these poor exiles and the world seemed to be cut off at once. They must have regretted that they had not died before their exile; for even the English would not have been so pitiless as to deny them graves in their native soil. The dead were happy; for they were not exiles!

While they thus stood upon the wharf, the curiosity and inquisitiveness of the New England people would naturally lead them into the midst of the poor Acadians. Prying busybodies thrust their heads into the circle wherever two or three of the exiles were conversing together. How puzzled did they look at the outlandish sound of the French tongue! There were seen the New England women, too. They had just come out of their warm, safe homes, where everything was regular and comfortable, and where their husbands and children would be with them at nightfall. Surely they could pity the wretched wives and mothers of Acadia! Or did the sign of the cross which the Acadians continually made upon their breasts, and which was abhorred by the descendants of the Puritans, — did that sign exclude all pity?

Among the spectators, too, was the noisy brood of Boston schoolboys, who came running, with laughter and shouts, to gaze at this crowd of oddly-dressed foreigners. At first they danced and capered around them, full of merriment and mischief. But the despair of the Acadians soon had its effect upon these thoughtless lads and melted them into tearful sympathy. . . .

After standing a long time at the end of the wharf, gazing seaward, as if to catch a glimpse of their lost Acadia, the strangers began to stray into the town.

They went, we will suppose, in parties and groups — here a hundred, there a score, there ten, there three or four, who possessed some bond of unity among themselves. Here and there was one, who, utterly desolate, stole away by himself, seeking no companionship.

Whither did they go? I imagine them wandering about the streets, telling the townspeople, in outlandish, unintelligible words, that no earthly affliction ever equaled what had befallen them. Man's brotherhood with man was sufficient to make the New Englanders understand this language. The strangers wanted food. Some of them sought hospitality at the doors of the stately mansions which then stood in the vicinity of Hanover Street and the North Square. Others were applicants at the humble wooden tenements, where dwelt the petty shopkeepers and mechanics. Pray heaven that no family in Boston turned one of these poor exiles from their door! It would be a reproach upon New England, — a crime worthy of heavy retribution, — if the aged women and children, or even the strong men, were allowed to feel the pinch of hunger.

Perhaps some of the Acadians, in their aimless wanderings through the town, found themselves near a large brick edifice, which was fenced in from the street by an iron railing, wrought with fantastic figures. They saw a flight of red freestone steps ascending to a portal, above which was a balcony and balustrade. Misery and desolation give men the right of free passage everywhere. Let us suppose, then, that they mounted the flight of steps and passed into the Province House. Making their way into one of the apartments; they beheld a richly-clad gentleman seated in a stately chair with gilding upon the carved work of its back, and a gilded lion's head at the summit. This was Governor Shirley, meditating upon matters of war and state, in Grandfather's chair!

If such an incident did happen, Shirley, reflecting what a ruin of peaceful and humble hopes had been wrought by the cold policy of the statesman and the iron hand of the warrior, might have drawn a deep moral from it. It should have taught him that the poor man's hearth is sacred, and that armies and nations have no right to violate it. It should have made him feel that England's triumph and increased dominion could not compensate to mankind nor atone to Heaven for the ashes of a single Acadian cottage.

Do not read this account through without stopping for questions and answers and explanations. To begin with: let Acadia be pointed out on the map; let all the children receive an accurate idea of its location and characteristics; let the teacher give them some account of the early settlement of this colony and of the first French settlement in North America at Quebec in 1608. As the story progresses, and especially at its close, the explanations will continue. Questions such as the following may be in place:

To whom was Louisburg given by the treaty of 1748?

What was the cause of the war which broke out in 1754? What was this war called? When and where was General Braddock's army defeated? By whom were the remains of his army preserved?

When was Acadia first settled by the French? What was the character of its inhabitants? To whom was Acadia ceded at the peace of 1748? When were the French forts taken by the English? Of what were the Acadians accused, and how did the English use their power over them? Were the accusations true? About how many Acadians were there? How many came to Massachusetts?

Tell what you can of "the story of the Acadian exiles."

What famous poem is there which tells the fate of the Acadians, and by whom was it written?

Who was king of France at this time?

If the children are old enough or have had sufficient taste of history to warrant it, then something of the results of this old French war might be indicated. To do this their attention should be called to the contests for more than one hundred years preceding this time between the kings of Spain, France, and Great Britain, for the supremacy in North America. Attention might be directed to the fact that the Spanish colonies were in the south; that the English colonies, few and feeble, were scattered along the Atlantic coast from Maine to Georgia; that the French first settled, and had held up to this time, Acadia, the valley of the St. Lawrence, and the entire valley of the Mississippi River. In subsequent lessons the narrative could be continued from Hawthorne or other sources, including an account of the attack on Quebec, the battle upon the Plains of Abraham, the death of the two generals (Wolfe and Montcalm), and the capture by the English of that important French city. The attention of the children should then be called to what they would suppose would have been the probable results had the English been defeated, so that the French might have dictated terms of peace to Great Britain. Bring to their minds the supposition that these English colonies might have fallen into the hands of the French. Let them imagine French emigrants pouring in here until they outnumbered the English. Let their active and vivid imaginations picture to them a line of French colonies extending along the coast from New Brunswick to Florida. Let them picture to themselves French settlements springing up throughout the valley of the Mississippi. They will readily see that as the population increased, the French would soon have all the country east of the Alleghanies, all that great valley between the Alleghanies and the Rocky Mountains, together with the valley of the St. Lawrence; — all would be dominated by France; settled by her people; speaking her language; subject to her laws, and believing her religion.

As it was, however, the results of the old French war made the American revolution not only probable but certain. Indeed a French statesman, Count de Vergennes, on hearing the results of the war and the humiliating terms which England had imposed upon France, sweeping her entirely off from the continent of North America, exclaimed: "The English have overshot the mark; they will soon levy a tax upon their colonies, these colonies will refuse to pay this tax, and, no longer needing the protection of the mother country, will strike off all dependence upon her."

Of course every teacher will see that the amount of the foregoing which they will use will depend upon the advancement of their classes. Younger classes will receive much less of it, while older classes will comprehend it all.

METHODS IN GEOGRAPHY.[1]

BY LARKIN DUNTON, LL.D., AND MISS L. T. MOSES.

VI.

THIRD YEAR'S WORK.

THE work in place lessons for the third year is the review of the previous work, and such a study of the town or city as will make the pupil pretty well acquainted with his home. In addition to knowing the town or city it will be well to know its communication with the outside world. In order that the pupils may actually observe the objects to be known, they should be taken by the teacher to a hill or other place of observation from which they can see the town or the part of it to be studied. From this vantage ground the pupil, directed by the teacher, should observe the boundaries of the section to be studied, the roads and streets, the railroads and other roads which lead out of the place, and the prominent objects both natural and artificial.

The first thing to be done on arriving at the place of observation is to find the points of the compass, which, of course, can be easily done if the sun is visible; in case the day is cloudy, the teacher should carry a compass, and use that for establishing the directions. After this is done, the boundaries of the town or section are found, beginning with a natural boundary, if there be one, as being more prominent. In connection with the boundaries it is well to point out the towns adjoining and the means of reaching them. The railroads and highways are then observed, and their general directions, their crossing in the town, or their passing through it, are also noted. The streets of the town, which can be seen from the position chosen, are now observed, both in their general direction and in their relation to each other. The natural features, the hills, plains, and valleys, the brooks or rivers draining off the water, the ponds or lakes filling the hollows, the forests, — all are observed and located in respect to the town and to each other. Moreover, the beauty of the whole varied scene, or of any part of it, with the beauty of the sky overhanging all, should be observed and described.

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[1] Copyright, 1887, by Larkin Dunton and L. T. Moses.

The prominent artificial structures should now be observed, such as the churches, schools, railway stations, the post-office, or any monument commemorating persons or deeds. These should all be located in relation to the town, to each other, and to the streets on which they are situated. In this connection the first house, church, and school-house in the town may be pointed out; or, if they are no longer standing, the site where they once stood may be shown. The teacher should not neglect in this connection to point out the birthplace or home of any person whose works or deeds have done honor to his native or chosen home.

At subsequent sessions of the school the teacher should tell the pupils the stories of the settlement of the town, of the deeds commemorated by monuments or buildings, and of the writer or statesman or philanthropist whose home was noticed.

After the pupils return to school the teacher should question them in regard to what they observed from the hill, and any false notions in regard to the position of the objects observed should be corrected by another visit of the class to the place of observation. If this is sufficiently near the school it will be well to make repeated visits and to observe but little at any one visit. After discussing what has been seen at one time, and its position, it is better to go again to impress the picture more strongly on the mind and to see more objects. Thus it would be well to get the points of the compass and the boundaries during the first visit, the roads and the streets on the second visit, then the surface and drainage, and lastly the buildings. In case this could be done, the pupils need stay on the hill no more than ten minutes. But at least two visits should be made to the place of observation, even if the place is at some distance; but with this limited number of visits the time should be lengthened to twenty or thirty minutes.

It has been found to be a good exercise in this work to have the teacher, and afterwards the pupils, suppose themselves to be strangers in the place, and in this capacity to inquire their way from the school to the church, depot, store, brook, or any other place which the pupils have observed. The teacher asks for information and the pupils give it, while the teacher acknowledges the favor politely. Then the pupils ask for and the teacher gives the information, and the pupils return thanks; the teacher indicating her pleasure in granting the favor by a bow or by well-chosen words. Finally the pupils personate both the stranger and the person who directs. A more difficult exercise is to have the pupils imagine themselves in another part of the town and to have them ask for and give information there. These exercises afford a desirable opportunity of teaching the pupils how to ask and confer a favor graciously. One who has never tried this sort of an exercise will be surprised to see how interested the children are in learning to do things politely, and how hard they will try to be polite when the gracious way of doing a thing is presented to them. Sometimes it is well to let several children do the same thing, and then let the children tell which they would like to imitate. They invariably select the way that is most pleasing.

The work on plans this year should include the making of plans of the school-room, of one floor of the building, and of the school grounds, to a scale, and the drawing roughly of the neighborhood with its streets and buildings, and also the town, or a section of the town, in which the school is situated. The measure for the school-room may be either the yard or the foot; if the latter is taken, the fraction of an inch must be used all through the lesson; and if the former is taken, the measure of the doors and any projections or recesses of the wall would necessitate using the fractions of a yard. It has been done quite easily by using a scale of one quarter of an inch to a foot. In case this measure is taken it will be well to have a number lesson immediately before the drawing of the plan, and in the number lesson to familiarize the pupils with the problems that will come up in the lesson. It will be of advantage to put the results needed in the lesson on the board in this way:—

Measures for Plan of Room. Scale: ¼ in. to the foot.

Length of room,	32 ft. = 8 in. on plan.
Width " "	30 ft. = 7½ in. " "
Distance of platform from the wall,	10 ft. = 2½ in. " "
Length of platform,	9 ft. = 2¼ in. " "
Width " "	5 ft. = 1¼ in. " "
Distance of the door from the wall,	3 ft. = ¾ in. " "

After this is done the plan can be drawn without difficulty.

The plan of the floor on which the room is situated will be more difficult to draw. Heretofore the pupils have drawn their plans in the presence of the object drawn; but in this case all the measurements for a given lesson must be made by the class before the lesson is given, and the children will be obliged to work from a mental picture of any given line, instead of the line itself, as heretofore. The measure for the building should be either the yard or the rod. If the foot was used for the room it will be well to use the yard for the building, as the children will thus become familiar with this measure. They can become familiar with the rod in their measurement of the grounds. In order that the measurement of the building should be a matter of observation for all, it is well to divide the pupils into groups of four. Each group is to be furnished with a yard measure. The teacher appoints one in each group to use the measure, one to help by marking each yard measured with his finger, another to count the number of yards and to report to a fourth, who writes the different dimensions on a slate or paper. It will require one lesson to get the outline of the building. Where it is easier the measurement for the outline may be made from the outside, allowing for the thickness of the walls. For most buildings the scale of a quarter of an inch to a measure will serve. It is well to make the measurements in whole numbers, whatever the measure may be; a fraction over is to be counted as a whole measure if it is a half or more, otherwise not used.

The grounds about the school are to be carefully drawn to a scale, using the rod as a measure. A rough plan of the neighborhood is to be drawn by the children, and the correct plan of the city may be studied by them in connection with their observation of the city or section of it.

The following exercise has helped the children to make rough plans of the streets in the neighborhood. The teacher draws a large slate on the board. In the center of it she draws a small outline of the school-house. She then has the pupils decide in which direction the different streets or other objects lie. She now tells the class that she will take a walk and that they are to follow her, and she moves the chalk along to represent a street. The pupils tell the name of the street represented; and where streets cross they are indicated by lines crossing the street represented. After one or two streets have been passed, the teacher turns to the right or left, represents another street, and goes on to a corner, which is indicated by a line crossing the one the teacher is on. The children are now asked where the teacher is, and they name the church, store, or other well-known building on the corner. Several of these walks are taken in this way, the teacher leading. When the pupils are sure of their ground one of their number may be called upon to lead the class, first to his own home or any given place, and afterwards wherever he will.

The teacher may now dictate the direction, and the pupils may draw at her dictation. These exercises may be dictated by using the terms right and left to direct the pupils, or by using the points of the compass. It is well also to direct by description only, and have the pupils follow and tell where the teacher has stopped; the pupils can also be benefited by the giving of clear and explicit directions, so clear that the class can follow easily.

The class ought now to be able, with a very little instruction in regard to the subject, to understand the use of maps and charts. This finishes the lessons on place, and the work on nature may now begin.

DRAWING IN PRIMARY AND GRAMMAR SCHOOLS.[1]

BY WALTER S. PERRY,

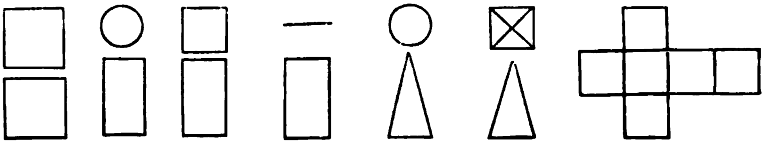
Director of Art Department, Pratt Institute, Brooklyn, N. Y.

V.

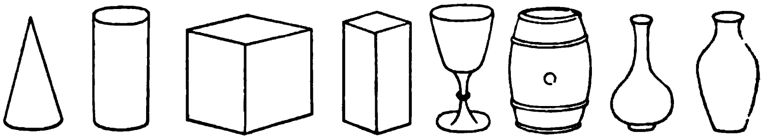
THE architect conceives in his mind the form of a new building. No oral or written description can give the workman an adequate idea of the various parts and details of construction. The thought is in the mind of the one who plans the structure, and he must give expression to it in such a way that those who are to assist in its construction shall know the facts or true shape of every object which enters into its composition. Drawings are made which show all the facts of the floors, elevations, and the various details, together with the dimensions of every part. These drawings become working drawings to the mechanic, because from them he gains that knowledge of facts which enables him to work understandingly, and to execute the idea of the architect. He sees in the drawings before him the method of construction of the whole object. Such drawings illustrate one division of the entire subject of drawing — that relating to *facts* of forms.

[1] Copyright, 1887, by Walter S. Perry.

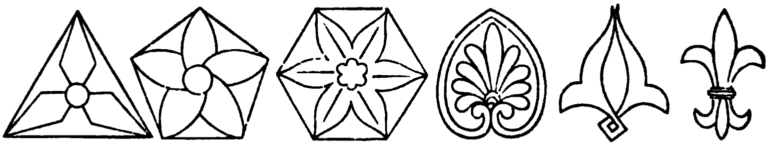
But when we wish to gain only a general knowledge of the object we do not care for the facts of all its parts; we wish such a picture as is produced by the camera when placed a short distance from the object. This view gives us its *appearance.* The photograph or perspective drawing gives us a general conception of the whole; it does not furnish the facts. A mechanic could not produce the object from such a drawing or picture. But while we have a drawing which gives the facts of the object, and another which gives the appearance of it, there is still another division to be considered; the constructed object in its plainness does not give the feeling of completeness. The ornamentation must be, so far as possible, a part of the construction, but there are ornaments which are distinct in character, and the drawings which express such designs may be spoken of as coming under the *decoration* of form.



FACTS OF FORM.



APPEARANCE OF FORM.



DECORATION OF FORM.

Drawing is the language by which a true idea of the form, the appearance, and the decoration of an object is conveyed from one person to another. It is the main language of the skilled constructive industries, and its importance to the designer and artisan cannot be overestimated. There are included in the three divisions named all the constructive, representative, and decorative arts, and the drawings illustrative of these divisions may be spoken of as relating to facts of form, appearance of form, and decoration of form.

The study of drawing, then, to be complete, must include exercises in all three divisions and must be taught in a clear, logical, and systematic manner. Formerly the drawing in the public schools was almost wholly of the last division. Great stress was laid upon design as relating simply to the decoration of flat surfaces. The fact that design enters so largely into the construction of all buildings, furniture, machinery, and objects of domestic utility seemed to be wholly lost sight of, and the knowledge of how to make the working drawings of one of the simplest of the geometric solids could not be gained from many of the drawing-books designed for use in the public schools. Of late there have been many changes, and the person in search of true educational work can find books illustrating it. There exist, however, too many books made simply to sell, without any principles underlying the course of study.

It may be safely stated that in more than half of the schools of the country that claim to teach drawing, the subject as mentioned in the course of study contains no definite ideas for the teacher to carry out. Vague directions are sometimes given, which are of little practical value to the teachers, and little or nothing is done except to make drawings from a few flat copies. Even in many places where special teachers are employed there is not a fixed purpose or aim in the instruction, and the schools are made subject to experiments as often as there are changes in teachers. The time spent on such work is, in a measure, wasted. There must be educational principles underlying all work, or the results cannot be satisfactory

This series of papers has treated so far the work of the primary schools, together with the general details of execution for pupils of all grades. Drawing will now be considered in respect to its three fundamental divisions already named, and the division first to receive attention must be the one underlying all others, namely:

CONSTRUCTION, OR THE FACTS OF FORM.

How are we to teach this subject and what is its full meaning? Let us look back a little. In previous papers it has been explained how children are to mold the various geometric forms, cut tablets or papers to represent the true shape of their various faces, and to arrange them so as to give an intelligent idea of the form of the solid, etc.

Suppose we consider a cube: it has six faces, the faces are square in shape. Place or draw a square to represent its front face, and slightly above it another square to show the shape of the top face. We have here all the facts of the cube, and if to this we add figures to show the dimensions, we have a complete working drawing from which a carpenter might work in producing the object itself. This is a simple thing from which to make a working drawing, but we must begin simply with the children. Now we will use the cylinder. What must we draw for its front view? What kind of a tablet must be formed or cut to express its shape in outline? This may trouble the pupil somewhat, but let him pass the finger straight up the left side (holding the cylinder directly in front of the eye), straight across the top, down the right side, and across the bottom. Do this several times, and then try to make the shape in the air, then perhaps on the board with the end of the finger, and the pupil will soon discover that the front view is to be represented by an oblong. For the top view a circle must be drawn, and by placing it as in the second illustration we have expressed the facts of the cylinder. The front views of a square-prism and of a sheet of paper are the same in outline as the cylinder, but the difference in the top views is expressed by drawing a circle for one, a square for another, and a straight line for the third.

There are some objects which require more than two views in order to express all of their facts, but at first the pupils should be required to draw such objects as can be shown in two views. Many of the geometric models can be shown in this way, as the sphere, hemisphere, cube, cylinder, square-prism, cone, etc. These objects may be drawn in upright, and then perhaps in horizontal, positions, as the change of position often presents new difficulties to the pupils.

PATTERN-MAKING.

It is desirable that pupils should not only learn to draw the facts of the various solids as presented in one or more views, but they should also learn to draw the patterns and to make the objects out of paper. They should make them not only for the knowledge and manual dexterity gained in doing so, but also that they may have the objects to study when drawing various views, and later on when drawing the appearance. If the pupil places one face of a cube on paper, and marks around it, rolls it over and marks around another, and so on till he has outlined the six, he produces the pattern as seen in the last figure of the first line of illustrations, and by adding laps this may be cut out of paper and pasted to form the complete geometric model. This is a step beyond clay modeling and toward manual training. Moreover, objects are produced which are of great use in the school-room in pursuing advanced work with the same models or with combinations of the same. Pupils are greatly interested in such work if presented so as to appeal to them in the proper manner. They enjoy making real things, and take pride in doing such work well.

LANGUAGE LESSONS AND EXERCISES.[1]

BY L. W. RUSSELL, A.M.

VIII.

ADJECTIVES.

THE study of adjectives with children affords a wide range of valuable language work. Their early recognition of the qualities of things gives rise to a corresponding demand for words to express those qualities. The adjectives, too, which limit in respect to number, quantity, and location, come into use but little later than those which denote qualities. This early and progressive demand for adjectives, which the observant child experiences leads him to catch them from all people with whom he meets, and sometimes even to invent them for himself. He thus falls into many inaccuracies with his adjectives, and slang terms readily fasten themselves upon him.

Another fault in the speech, not only of children at school, but also of many fairly educated adults, is the use of extravagant adjective terms; thus, that which is simply pretty or pleasing is said to be "grand" or "magnificent"; that which is simply palatable is pronounced "delicious" or "exquisite." A habit, too, which is so common that few of us are wholly exempt from it, is the application of certain favorite adjectives to almost everything which calls for a descriptive term; for instance, with some people things which affect them agreeably are all "splendid;" as, a splendid hat, coat, or pair of boots; a splendid walk, ride, sail, or gait; a splendid dinner, a splendid cigar; splendid oysters, clams, or lobsters; a splendid sermon, a splendid nap; and "our minister is *just splendid!*" A splendid woman with her splendid pug, in their splendid carriage, etc., as well as a splendid sunset and a splendid illumination.

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[1] Copyright, 1887, by Eastern Educational Bureau.

With others the ever-ready adjectives might be "beautiful," "lovely," "sweet," and the like; or, for slightly disagreeable things, "horrible" or "awful." This overworking certain adjectives, with other faults in their use, is the natural result of a lack of early cautions and training respecting them, and the rarity of pure models in the use of them among the common people.

An understanding of the above and kindred matter, and due reflection upon the graphic pictures and the truthful shades of coloring and meaning which may be portrayed by the use of fitting adjectives should reveal to the teacher the importance and character of the lessons and exercises which the pupil needs.

Teaching.—The pupil's attention is now to be centered upon an element of speech which he is inclined to use liberally; but in practice he lacks words, and often applies those which he has carelessly and erroneously.

Teach, first, the nature and offices of *qualifying* adjectives; later, those which simply limit. For this purpose make use of objects which are familiar and which have well-marked qualities; as, an orange, an apple, a flower. Call (1) for words which indicate qualities of sight; (2) of feeling; (3) of smell; (4) of taste; (5) of hearing. Also those which indicate weight, size, and other plainly apparent qualities.

Call attention to the fact that our knowledge of an object is the sum of such of its qualities as we recognize and appreciate. Impress from the beginning through all the exercises the importance of gaining this knowledge and of having the right words to express it.

Use various objects, as above, until the pupils fairly comprehend the character of the class of words in hand.

As a second step, use objects not present, which are brought to the mind by recollection; as, a ship, a balloon, a horse, an ox, a church-bell, a tree, a path, an avenue.

As a third step, or in connection with the others, call attention to the changes in the adjectives to denote the degrees of comparison, especially in respect to size, weight, length, and other easily noticeable qualities.

PUPILS' EXERCISES.

1. Each pupil name an animal and give orally words (adjectives) which denote qualities of the same; as, a rabbit, a horse, a kitten, an elephant, a squirrel, a mouse, a hawk, a sparrow. Do the same for fruits, flowers, trees, articles of dress, the sky, water, snow, ice, and other common objects.

2. Pupils take turns in naming objects, calling upon another to give qualifying words; as, *rabbit;* a *timid* rabbit.

Reverse this: one pupil give a qualifying word and others appropriate objects for it to qualify; thus, *sharp:* a sharp *knife*, a sharp *needle*, a sharp *saw*, sharp *vinegar*, sharp *wit*, a sharp *cut*, a sharp *contest*, and so on. In the use of a word like the above, "sharp," an opportunity is given to show the way in which the same word, in its secondary meanings, applies forcibly and properly to greatly varying objects.

3. Name *parts* of objects and give proper qualifying words, as above; thus, of a cat: the fur, the eyes, face, ears, tail, claws. The parts of an owl, a mole, a rose, a knife, a watch, and other articles.

4. Give qualifying words to denote size, color, shape, weight, speed, taste, fragrance, texture, hardness, etc.

5. Let one pupil give qualifying words for an object in mind, not naming it, for others to guess, the one who first gives the right name having the privilege to start another in the same way; thus: "I am thinking of an object that is *large* and *round* and *hard*, and is *yellow* (hands up — "A pumpkin." "No"), is a little *rough* (hands up — "An orange." "No") and is *valuable* and *useful* and — which you would like for a *Christmas present* (several — "A gold watch," "a gold watch." "Right!"). This exercise will arouse a class to vigorous and profitable mental activity, and may be applied to verbs and other parts of speech as well as to adjectives.

6. Make use of school reading lessons for the selection of adjectives, occasionally substituting others and noticing their fitness or unfitness. Critical help from the teacher is here needed.

WRITTEN EXERCISES.

1. The material used in the above exercises in this number may be employed, by slight variations, for sentences of the various kinds. They may also be grouped for short stories.

2. Name subjects for short stories or descriptions and give promiscuously several adjectives and nouns to be woven into them; as, "Going Skating:" Pond, cold, smooth, bright, skates, strong, glare, rough, trees, sticks, hard, happy, swift, fall, kind, boys, girls, policeman, fire, warm, etc.

COMPOSITION EXERCISE. (For pupils somewhat advanced.)

Snow.

Give the subject at a time when snow is upon the ground. Let all subjects, as far as practicable, be *seasonable.*

Two or three fifteen-minute talks upon various things about snow should be had with the pupils before the writing progresses far. Some of the more interesting pleasures connected with snow and the benefits and comforts which it gives should first be talked of. Allow the pupils a large share in this. Stories about winter, sleighing, coasting, building Eskimos' houses, and the like, may be read. Extracts from Whittier's Snow-Bound should be read. In constructing the outline, or guide, for writing, show reasons for the arrangement of topics adopted.

Outline. — 1. What snow is; when and how formed. (Consult some work on meteorology or a good encyclopædia.)

2. The *falling* snow: its beauty, its purity, its downy lightness.

3. The *newly fallen* snow: snow crystals; the sparkling beauty of the landscape in the morning sunlight; the buried fences, the woodpile, rough and before unsightly places, all tucked away in the beautiful snow.

4. Its *uses:* protecting tender roots, like a warm blanket; aids traveling in cold countries; snow-houses; in melting fills the streams, lakes, and ponds.

5. The *drifting* snow: houses almost buried; snow tunnels; "breaking out;" the sleds, the teams, the men, boys, and girls.

6. Snow *sports:* snowballing; coasting; snow-forts; "storming the citadel"; "running the gauntlet" between two forts; snowballs flying; sleighing parties.

7. The dangers and terrors of snow: travelers lost and buried; trains blockaded; avalanches and their destructiveness.

8. Some extract about snow, as from Lowell, Whittier, or some other author.

Remark. — The greater part of the work is *getting ready* for the writing; when the pupils are full of the matter, composition will come rapidly. It is not usually best to require or ask all pupils to write upon every topic. Let them choose, and write within their experience and knowledge.

METHODS OF TEACHING ARITHMETIC IN PRIMARY SCHOOLS.[1]

BY LARKIN DUNTON, LL.D.,

Head Master of the Boston Normal School.

XII.

MULTIPLICATION.

THE multiplication table is the foundation of the process of multiplication. It is the tools without which neither multiplication nor division can be performed. Hence the child must make it so completely his own that it cannot be forgotten and that it will always be present to him in the twinkling of an eye when it is needed for use. It is in the power of the teacher to render such help to the little ones as will spare the tears which, without such help, will be sure to flow when the demand is made upon them to learn the multiplication table by heart.

If the teacher wishes happily to avoid these breakers he must be sure that two things always exist in proper relation one to the other — intelligence and practice. Intelligence, which is gained only through direct observation, was formerly neglected; but the tendency at the present time is to neglect the practice. Instead of drilling the pupils thoroughly in the multiplication table in school, by means of recitations and questioning, and by means of connecting the work at every step with the preceding lessons, many teachers are satisfied with making the children understand how it is formed, and leaving the memorizing to be done as home lessons. But it is the special task of the teacher to show the children how they should learn. In order to point out to inexperienced teachers what exercises they may introduce to advantage while the pupils are committing the multiplication table to memory, it will be necessary to go somewhat into details.

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[1] Copyright, 1887, by Larkin Dunton.

Since thorough drill requires a long time, it is recommended to make a preparation for the learning of the multiplication table while teaching addition and subtraction. When the pupils have thoroughly learned to add and subtract the number two, they may be taught to multiply by two; when they have learned to add and subtract the number three, they may learn the threes of the multiplication table, etc. By this course sufficient time may be secured for reviews, which here are indispensably necessary, since upon them depends the impressing of numbers upon the memory.

TWOS OF THE MULTIPLICATION TABLE.

In our treatment of numbers from 1 to 20 we have already found once 2, 2 times 2, and so on to 10 times 2, and we will rejoice at whatever has remained in the memory; still it is necessary to develop the facts again.

Place two balls on the numeral frame, or two points on the board beside each other, thus: —

● ●

and ask, How many balls are there? Then put two more balls with them, thus: —

● ●

● ●

and ask, How many times two balls are there? How many are two times two balls? How many are two times two? How many are two twos?

Just so may the ideas of 3, 4, 5, 6, 7, 8, 9, and 10 times 2 be developed. In doing this the following figure will be formed, and the following expressions of the truths which it represents should be repeated many times, both by individuals and in concert: —

●	●	Once 2 is 2.	10 times 2 are 20.
●	●	2 times 2 are 4.	9 „ 2 „ 18.
●	●	3 „ 2 „ 6.	8 „ 2 „ 16.
●	●	4 „ 2 „ 8.	7 „ 2 „ 14.
●	●	5 „ 2 „ 10.	6 „ 2 „ 12.
●	●	6 „ 2 „ 12.	5 „ 2 „ 10.
●	●	7 „ 2 „ 14.	4 „ 2 „ 8.
●	●	8 „ 2 „ 16.	3 „ 2 „ 6.
●	●	9 „ 2 „ 18.	2 „ 2 „ 4.
●	●	10 „ 2 „ 20.	Once 2 is 2.

It will help if the children are led to find that, for example, 3 times 2 units are just as many units as 2 times 3 units. Thus, in the following figure there are 3 rows of 2 points each, and there are also 2 rows of 3 points each.

● ●

● ●

● ●

So it may be shown that

4 times 2 are 8, and 2 times 4 are 8
5 „ 2 „ 10, „ 2 „ 5 „ 10
6 „ 2 „ 12, „ 2 „ 6 „ 12
7 „ 2 „ 14, „ 2 „ 7 „ 14
8 „ 2 „ 16, „ 2 „ 8 „ 16
9 „ 2 „ 18, „ 2 „ 9 „ 18
10 „ 2 „ 20, „ 2 „ 10 „ 20

The results stated at the right are already known as the sums of equal numbers. The one set of statements assists the pupil in remembering the other, yet the truths ought not to be confused. Practical examples like the following will guard against such confusion: —

A mother gave her son 4 apples yesterday and 4 to-day; how many times did he receive 4 apples? How many are 2 times 4? How many times 4 is 8? How many fours can be made of 8?

A woman gives her child 2 apples daily; how many times 2 apples does he receive in 4 days? How many are 4 times 2? How many times 2 is 8? How many twos can be made of 8?

Let the children illustrate the multiplication table as shown above, with points on their slates, and affix the results, thus:—

● ● 2
● ● 4
● ● 6, etc.

If they are to study the multiplication table at home, let them first construct it; otherwise it is apt to have little meaning. The impressing of the facts out of their order is to be effected mainly through question and answer, and is proper work for the schoolroom. The more varied the practice, however, the more firmly the facts are impressed upon the memory. Hence the reverse form of viewing the facts is to be used. For example: How many times is 2 in 12? How many twos in 12? How often is 2 contained in 12? How often can we take 2 from 12? etc. It is well to spend a week or two on the number 2; and a portion of each lesson should be given to practical applications; for example:—

1 whole =2 halves. 1 apple costs 2 cts.
2 wholes=4 halves. 2 apples cost 4 cts.
3 „ =6 „ 3 „ „ 6 „
etc. etc. etc. etc.

THREES OF THE MULTIPLICATION TABLE.

● ● ●
● ● ●
● ● ●
● ● ●
● ● ●
● ● ●
● ● ●
● ● ●
● ● ●
● ● ●

Let the course of instruction be as follows:—

a. Construct the table on the frame or board, as in the margin.

b. Practice alone and in concert forwards.

c. Practice alone and in concert backwards.

d. Question out of the regular order.

e. Let the children make the same on their slates.

The results, 1, 2, 3, 4, 5, 6, and 10 times 3, the children will easily retain; for 3×2 has been already learned in studying the twos; 3×3, in studying the number-picture for 9; 4×3, in the treatment of 12; 5×3, in the study of 15 on Chart VI; 6×3, in the study of 18 on Chart VI;

and 10×3=3×10=3 tens. These results will now afford little difficulty; 7, 8, and 9 times 3 will cause more. But 9×3=10×3—1×3; 7×3=7+7+7; 8×3=8+8+8; and all these are to be taught from the rows of points.

The following applications are suggested: —

1 orange costs 3 cents,
2 oranges cost 6 cents,
3 oranges cost 9 cents, etc.

FOURS OF THE MULTIPLICATION TABLE.

The course of exercises is the same as in teaching the twos and threes. More or less are already known of 1, 2, 3, 4, 5, and 10×4; so fix these numbers first. Connect 9×4 with 10×4; 6×4 with the known 5×4. Take special pains with 7×4 and 8×4. Apply as follows: —

1 horse has 4 legs,
2 horses have 8 legs,
3 horses have 12 legs, etc.

FIVES OF THE MULTIPLICATION TABLE.

a. The pupil knows 1, 2, 3, 4, 5, 10×5.
b. He learns 5×5=25 easily from the sound.
c. 9×5=10×5—1×5.
d. 6×5=5×5 and 5=30.
e. 8×5=2 times 4×5=2 times 20, or 4 times 2×5=4 times 10.
f. 7×5 is to be connected with 6×5.

Always direct the practice so as to connect the thing to be learned with what precedes; first *a*, then *b*, then *a* and *b*; then *c*, then *a*, *b*, and *c;* then *d*, then *a*, *b*, *c*, *d;* then *e*, then *a*, *b*, *c*, *d*, *e*, etc. Apply thus: 1 five-cent piece=5 cents, etc.

SIXES OF THE MULTIPLICATION TABLE.

a. 1, 2, 3, 4, 5, and 10×6 are known.
b. 6×6 is remembered by the sound.
c. 9×6 is to be connected with 10×6.
d. 7×6 is to be connected with 6×6.
e. 8×6 demands special work.

Application: 1 week has 6 working-days, etc.

SEVENS OF THE MULTIPLICATION TABLE.

1. 1, 2, 3, 4, 5, 6, and 10×7 are known.
2. 7×7 is easy to remember from the sound.
3. 9×7 is to be connected with 10×7.
4. 8×7 is to be connected with 7×7.

Application: 1 week has 7 days, etc.

EIGHTS OF THE MULTIPLICATION TABLE.

1. 1, 2, 3, 4, 5, 6, 7, 10×8 are known.
2. 8×8 is easy to learn from the sound.
3. $9\times 8=10\times 8-1\times 8$.

Application: 1 boy has 10 toes, etc.

NINES OF THE MULTIPLICATION TABLE.

1. 1, 2, 3, 4, 5, 6, 7, 8, 10×9 are known.
2. 9×9 is learned from the sound, also connected with 10×9.

Application: 1 yard costs 9 cents, etc.

TENS OF THE MULTIPLICATION TABLE.

The result is already known.

Application: 1 dime is worth 10 cents, etc.

If the children are made to observe, to recall, and to connect the unknown with the known, in the way just pointed out, they may soon be brought to understand any part of the multiplication table. But the teacher must discriminate sharply between understanding and knowing. Knowing presupposes continued practice and diligent repetition of what precedes; hence the pupil should never pass to a new sentence without reviewing what goes before. Let the new sentence be a reward for what is already learned, so that the children will be accustomed to find the reward for learning in the act of learning.

Knowing the multiplication table implies readiness for use. The child must remember only the result, not the process of reaching it. Question must follow answer instantly. In a word the multiplication table must be absolutely a thing of the memory. On thought of the words seven times five the thought of the word thirty-five must instantl [illegible] erfect understanding comes through illustration; perfect memorizing, through diligent use and through frequent repetition almost endlessly continued.

What we have already explained is only a preparation for learning the multiplication table. This preparation was aimed at in the addition of numbers from one to a hundred; for example, when the pupil was exercised in the successive additions of six, ground was broken for learning the sixes of the table. The results can be fixed in the mind only through continuous application. All up to this point is only a preparation for learning the table in its written form.

ALLITERATION.

BY WORD-TRIMMER.

FOLK who do not despise "apt alliteration's artful aid" will be glad to be reminded that the following boys are still on the benches of Dame Europa's school, namely: —

The enterprising Englishman, the scrutinizing Scotchman, and the impulsive Irishman, three brothers who when they play on the same side at football are known as the buoyant Britons; likewise the dogged Dutchman, the busy Belgian, the fanciful Frenchman, the superstitious Spaniard, and the pompous Portuguese; the natural Norwegian, the sociable Swede, the daring Dane, the jogging German, the skilful Swiss, and the imaginative Italian; the oscillating Austrian, the high-spirited Hungarian, the truculent Turk, and two cousins who were known, because of Turk's bullying, as the groaning Greek and the sorrowing Sclav, until a new boy, the revenging Russian, thrashed Turk and made him give back the figs and marbles he had robbed them of.

But intelligent intercourse and true teaching are weeding out painful peculiarities.

THE STUDY OF SYNONYMS.

DISTURB AND INTERRUPT.

1. Both are derived from the Latin.
2. Both relate to interference.
3. We may be DISTURBED either inwardly or outwardly; our minds may be DISTURBED by disquieting reflections, or we may be DISTURBED in our rest or in our business by unseemly noises.

   We are INTERRUPTED only outwardly, that is, in our business or pursuits.

   What will DISTURB one may not disturb another.

   An INTERRUPTION is positive. Whatever INTERRUPTS one person will INTERRUPT another.
4. "Care DISTURBS study."

   The advent of visitors INTERRUPTED my work.

The same distinction exists between these words when applied to things as to persons.

Whatever is put out of its proper condition is DISTURBED.

Whatever is stopped in the evenness or regularity of its course is INTERRUPTED.

Water suddenly put into motion is DISTURBED.

Water diverted from its ordinary channel is INTERRUPTED.

DREAM AND REVERIE.

1. DREAM is derived from the Latin.

   REVERIE from the French.
2. Both are opposed to reality, and have their origin in the imagination.
3. DREAMS occur in sleep and arise from natural causes when the imagination is in a sound state.

   REVERIES occur during waking hours and are the fruit of a heated imagination.
4. My midnight DREAM was fully as happy as my noonday REVERIE, though not quite as connected.

When the term DREAM is applied to the act of one who is awake, it admits of another distinction from REVERIE.

EDITORIAL.

READING must necessarily stand as one of the most important, and perhaps clearly the most important, study in the common schools. It is the gateway to all learning. The pupil cannot successfully study geography or arithmetic till he has acquired at least the elements of reading. No apology, therefore, is needed for placing great stress upon reading.

The following letter, omitting names and place, was recently received by the editor of this magazine: —

—— ——, January 18, 1888.

Mr. ——: *My dear sir*, — What, in your opinion, are the three principal ends desirable to be reached by teaching reading? Hoping to hear from you soon, I am, Very fraternally,

—— ——, Supt. Schools.

A proper answer to this question presupposes a correct apprehension of its meaning and intention. If immediate ends are intended, the reply should be very different from what it would be if ultimate ends are what the writer had in mind. Understanding, then, that the thought of the author was to inquire what are the three principal *immediate* ends which the teacher should keep constantly in mind in giving instruction to his classes in reading, the answer might be as follows: —

THE first thing for children to do in learning to read is to acquire the utmost facility in recognizing and pronouncing words at sight. This is primary reading. The Latin word "to read" is *legere*, which means "to pick up," and has special reference to the picking up of the words, printed or written, by the eye. To this end the word method of teaching reading is a great improvement over the old A B C method. For this purpose the use of a spelling-book with columns of words to be pronounced rapidly by the class is desirable and useful.

THE second point to be observed in teaching reading is the proper, accurate, and correct enunciation of the elementary sounds and pronunciation of the words. This part, or portion, of elementary drill in reading requires the careful, persistent, and patient attention of the teacher in a continued critical drill for a long time. It includes such a training of the vocal organs as to secure their flexible and accurate use.

THE third division of our subject comprehends a drill in force, emphasis, tones, etc., necessary to be acquired in order to render the meaning of the author in a clear and perspicuous manner. This is reading. All that precedes it is preliminary and only the scaffolding necessary for the construction of the building. The reading itself consists in receiving and conveying the author's thought. Thought is the ultimate end of reading.

IN a broader sense, as ultimate and not immediate ends, the objects of reading may be considered as follows: —

FIRST: To receive into the mind of the reader, or to originate in his mind, the thought which the writer had and which he has expressed in the arbitrary signs of the printed or written page. This is done by the eye only.

SECONDLY: To be able to convey, by means of the human voice, this thought to the mind of another intelligently and perspicuously. This requires the voice of the reader and the ear of the hearer.

THIRDLY: It should be borne in mind that this art of reading, when properly acquired, becomes a means of great mental discipline and personal improvement. It opens up to one infinite sources of information, by which he may acquire a greater amount of useful knowledge than by any other means possible. It must also be considered of great importance in view of the mental improvement which inevitably results from the careful, critical attention needed to become a master of the art, the concentration of mind, the diligence, patience, perseverance, required in acquiring this art of reading well. The cultivation of the voice, moreover, by which one is able to converse and to speak to public audiences with skill and success, is a matter of great moment both as a useful and very desirable accomplishment, and also as a source of important mental development and growth.

HAPPY HOURS.

ARRANGED BY MRS. CAROLINE S. MORGAN.

◆

WASHINGTON, LINCOLN, GRANT, AND GARFIELD.

Historical exhibition exercise, suitable for Washington's Birthday. Designed for twelve boys (or boys and girls) of the grammar grade, divided into four groups of three each, each group to have an evergreen wreath tied with red, white, and blue, the first bearing the name of Washington, the second that of Lincoln, the third that of Grant, and the fourth that of Garfield. A flag should be draped at the back of the platform.

(*In concert.*)

GOD of the Free! upon thy breath
Our flag is for the Right unrolled
Still broad and brave as when its stars
First crowned the hallowed days of old;
For Honor still their folds shall fly,
For Duty still their glories burn,
Where Truth, Religion, Freedom guard
The patriot's sword and martyr's urn.

(*First group. First pupil.*)

George Washington, our first President, was born in Virginia, February 22, 1732, as we all know very well, for wide-awake boys are pretty apt to remember all the holidays, whatever else they may forget. He had only a common school education, but he was a very good mathematician, and at the age of sixteen was a practical surveyor. Lord Fairfax employed him to survey large tracts of land, and in doing so he learned much that was of value to him in later years. When he was forty-three years old, he was elected commander-in-chief of the continental army, which he led to victory in the Revolutionary war. At fifty-seven he was made President of the nation whose independence he had done so much to win, and was reëlected for a second term. After his term of service was over, he returned to his estate at Mount Vernon, Virginia, which consisted of eight thousand acres and was worked by two hundred and fifty slaves.

He died in 1799, and in his funeral oration Henry Lee, of Virginia, said that he was "first in war, first in peace, and first in the hearts of his countrymen," words which have become famous.

(*Second pupil.*)

The republic may perish; the wide arch of our grand Union may fall; star by star its glories may expire; stone by stone its columns and its capitol may molder and crumble; all other names which adorn its annals may be forgotten; but as long as human hearts shall anywhere pant, or human tongues anywhere plead, for a true, rational, constitutional liberty, those hearts shall enshrine the memory, and those tongues prolong the fame, of George Washington. — *R. C. Winthrop.*

(*Third pupil.*)

Modest, yet firm as Nature's self; unblamed,
Save by the men his nobler temper shamed;
Not honored then or now because he wooed
The popular voice, but that he still withstood;
Broad-minded, higher-souled, there is but one
Who was all this, and ours, and all men's — Washington.
— *James Russell Lowell.*

(*Second group. First pupil.*)

Abraham Lincoln, our sixteenth President, was born in Kentucky, February 12, 1809. Unlike Washington, his parents were poor and his home humble, and he had almost no educational advantages; but his courage and perseverance conquered circumstances, and after trying his hand at rail-splitting and various other kinds of manual labor, as well as serving as a clerk and a postmaster, he studied law. His unusual ability soon won for him an established position, and almost at once he took an active part in the politics of his county and the State of Illinois, which was his home. He became very popular, was finally sent to Congress, and in 1860, greatly to his own surprise, was elected President. Like Washington, he was elected for a second term, upon which he had but just entered when he was cruelly assassinated, and died leaving a nation in sorrow and tears; for he was the idol of the North, the faithful friend of the South, and the fearless emancipator of four millions of slaves.

(*Second pupil.*)

Four years ago, O Illinois! we took from your midst an untried man, and from among the people. We return him to you a mighty conqueror. Not thine any more, but a nation's; not ours, but the world's. Give him place, O ye prairies! In the midst of this great continent his dust shall rest, a sacred treasure to myriads who shall pilgrim to that shrine to kindle anew their zeal and patriotism. Ye winds that move over the mighty places of the West, chant his requiem! Ye people, behold a martyr whose blood, as so many articulate words, pleads for fidelity, for law, for liberty. — *Henry Ward Beecher.*

(*Third pupil.*)

Peace to that gentle heart! the peace he sought
  For all mankind, nor for it died in vain.
Rest to the uncrowned king who, toiling, brought
  His bleeding country through the dreadful reign;
Who, living, earned a world's revering thought,
  And, dying, leaves his name without a stain.
— *Robert Leighton.*

(*Third group. First pupil.*)

Ulysses S. Grant, our eighteenth President, was born in Ohio, April 27, 1822, and at seventeen years of age entered the Military Academy at West Point, where he graduated four years later without having distinguished himself in any way. He was then stationed on the frontier for several years, and went through every battle of the Mexican war except one, receiving two promotions for his bravery. At the end of eleven years he left the army, and later was in business with his father in Galena, Illinois. Soon after the breaking out of the Civil War, he was made a colonel in the army, achieved brilliant success, was rapidly promoted, and finally made general-in-chief of all the United States forces. After the close of the war he was twice elected President and served his country well, but his great fame rests upon his splendid ability and success as a soldier, of which we are all very proud. We all remember the time when he died, two years ago last August, in the little cottage on Mount McGregor. The nation mourned.

(*Second pupil.*)

His combinations, movements, and battles were models which may well challenge comparison with those of Napoleon during his best days. Withal he was still modest, considerate, and approachable. Victory brought with it neither pride nor presumption. Fame, so dear to every honorable and patriotic soldier, had now come to him; his praise resounded throughout the North, and no name in all the land brought so much pleasure to the minds of the loyal and patriotic people as did that of Ulysses S. Grant. —*James H. Wilson.*

(*Third pupil.*)

The stars look down upon thy calm repose
As once on tented field, on battle eve;
No clash of arms, sad heralder of woes,
Now rudely breaks the sleep God's peace enfolds, —
Good-night.

Thy silence speaks and tells of honor, truth,
Of faithful service, generous victory,
A nation saved. For thee a nation weeps —
Clasps hands again, through tears! Our leader sleeps!
Good-night.

(*Fourth group. First pupil.*)

James A. Garfield, our twentieth President, was born in Ohio, November 19, 1831, and, like Lincoln, was the child of poverty and obscurity. His father died when he was but two years old, leaving his mother without means to support her four little children, and James, when only twelve years of age, had to do what he could to help, and he was by turns a carpenter, a bookkeeper, and a boatman on the canal. But he was ambitious for an education, and by great exertion paid his own way through a college in Ohio, where he was first janitor, then teacher, then president. He loved study, and was a fine student and a brilliant writer and speaker. He studied law, but went into the army before he began to practice, and by his bravery was promoted to the rank of brevet major-general. He was then sent to Congress, and in 1881 was elected President. His prospects were very bright, but, like President Lincoln, he was to die a martyr's death, and was shot by an assassin only four months after his inauguration. He lived through nearly three months of great suffering, and when he died the nation had the sympathy of the world.

(*Second pupil.*)

Surely, if happiness can ever come from the honors or triumphs of this world, on that quiet July morning James A. Garfield may well have been a happy man. No foreboding of evil haunted him. No slightest premonition of danger clouded his sky. His terrible fate was upon him in an instant. One moment he stood erect, strong, confident in the years stretching peacefully out before him; the next he lay wounded, bleeding. helpless, doomed to weary weeks of torture, to silence, and the grave. — *James G. Blaine.*

(*Third pupil.*)

Fallen with autumn's falling leaf,
  Ere yet his summer's noon was past —
Our friend, our guide, our trusted chief!
  What words can match a woe so vast? . . .

Farewell! The leaf-strewn earth enfolds
  Our stay, our pride, our hopes, our fears;
And autumn's golden sun beholds
  A nation bowed, a world in tears.
— *Oliver Wendell Holmes.*

(*In concert.*)

God of the free! our nation bless
  In its strong manhood as its birth.
And make its life a star of hope
  For all the struggling of the earth.
Thou gav'st the glorious Past to us;
  Oh, let our Present burn as bright,
And o'er the mighty Future cast
  Truth's, Honor's, Freedom's holy light. — *W. B. Wallace.*

[This exercise might open with the singing by the school of The Star-spangled Banner, and close with My Country, 't is of Thee.]

EXAMINATION QUESTIONS.

Selected from those given at Milford, Mass., December, 1887, to Grades I and II.

At the head of each sheet of paper write your name, the date, and the subject of this examination. Place before the answer the same figures that are before the question. During the examination, ask no questions about it.

HISTORY.

GRADE I.

1. How was America named?
2. When and by what company was Jamestown founded?
3. When and by whom was Boston founded?
4. Give an account of the settlement of Providence.
5. What three colonies formed Connecticut?
6. What was the direct cause of the Revolutionary war?

7. What were the Writs of Assistance? What was the Stamp Act?

8. When and where did the Second Continental Congress meet, and what action was taken?

9. Tell the story of Arnold and André.

10. When and where was the treaty of peace signed? When was our Constitution adopted?

ARITHMETIC.

GRADE I.

1. Sold tea at 115 per cent. of its cost, and thereby gained 9 cents on a pound. What was the cost per pound?

2. A sold his carriage for $210 and lost 16 per cent. What did it cost?

3. Find the interest on $890 for 5 years, 7m., 8d., at 6 per cent.

4. A note for $450.60 dated March 5, 1880, was paid December 31, 1881, with interest at 7 per cent. What was the amount?

5. A broker receives $669.50 to invest in flour; after deducting his commission of 3 per cent. how many barrels of flour can he buy at $5 per barrel?

6. How much more is the interest of 15 cents for 15 years at 4 per cent. than the interest of $15 for 15 days at 8 per cent.?

7. What is the present worth of $360 due in 90 days, the current rate being 4 per cent.?

8. What is the bank discount on a 4-month note for $875 at 6 per cent.?

9. Find the proceeds of a 3-month note for $966, discounted 20 days after date at 6 per cent.?

10. What must be the face of a 4-month note, which, discounted at 6 per cent., will yield $293.85?

NOTE. — Put down all calculations used in the solution of the problems.

GRADE II.

1. Divide the least common multiple of 48, 36, 72, 24, by their greatest common divisor.

2. Use cancellation in dividing 14×15×16×24×48×60 by 7×30×8×6×12×3.

3. What will 2 tons of hay cost if $\frac{5}{8}$ of a ton cost 11\frac{1}{4}$?

4. $\frac{3}{5}$ is $\frac{2}{10}$ of what number?

5. If I pay $20 for 7$\frac{3}{8}$ barrels of apples, what is the price per barrel?

6. Add $\frac{7}{8}$, $\frac{3}{10}$, $\frac{3}{20}$, $\frac{5}{16}$.

7. If I pay $2.13 for $\frac{3}{8}$ of a cord of wood, what must I pay for 5$\frac{1}{2}$ cords?

8. Reduce $\frac{7}{12}$ to a decimal of four places.

9. Multiply one thousand by one thousandth, and subtract one ten thousandth from the product.

10. If $\frac{1}{8}$ of an acre cost 15\frac{7}{8}$, what will 46.78 acres cost?

NOTE. — Put down all calculations used in the solution of the problems.

BOOK NOTICES.

THE INTERSTATE PRIMER SUPPLEMENT. Designed as a drill-book to supplement the primer and first reader in primary schools. By S. R. Winchell. Chicago: The Interstate Publishing Co. Boston: 30 Franklin Street. Price, 75 cents.

Primary teachers are agreed that the First Readers which are commonly found in the schools do not afford sufficient practice in recognizing new words in different combinations. The aim of this book is to supply a still greater amount of reading without the introduction of many new words. The book is very attractive in appearance.

RIVERSIDE LITERATURE SERIES, Number 31, December, 1887.

My Hunt After the Captain, and other papers. By Oliver Wendell Holmes. With notes and an introductory essay.

Extra number, November, 1887. Portraits and Biographical Sketches of Twenty Authors.

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THE ELEMENTS OF PSYCHOLOGY. By David J. Hill, LL.D., President of Bucknell University. With illustrative figures. New York and Chicago: Sheldon & Co. For sale by Warren P. Adams, 36 Bromfield Street.

The wonderful success which Doctor Hill's Rhetorics and Logic have had will lead all intelligent teachers to welcome gladly this new contribution to our educational literature. The work is clear, direct, and simple in style, and well adapted for the class-room. Its progressive analysis is clearly indicated by the typographical arrangement. It contains a full treatment of the intellect, sensibility, and will, also abundant references to the best and most recent writers on this subject. This work, like his other text-books, has grown up in his own class-room and is, therefore, eminently practical.

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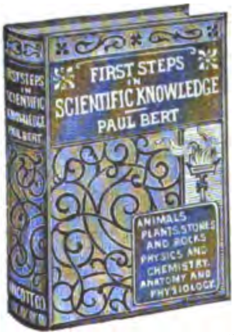

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Common School Education,

DEVOTED TO THE ART OF INSTRUCTION.

Vol. II. MARCH, 1888. No. 3.

APPLIED PHYSIOLOGY.

BY META WELLERS, CHICAGO.

ALL thoughtful teachers who have read Prof. W. O. Atwater's article on "Pecuniary Economy of Food," in the January number of The Century, will recognize the fact that there is an urgent demand for instruction on a topic of much vital importance to the coming generation. As the country becomes older and more densely populated the reckless wastefulness which has characterized more especially the early settlers of our western states must give place to habits of economy and forethought. In most of our cities steps in the right direction have been taken by introducing the study of physiology in an elementary form into the grammar grades of the public schools. There is, however, one difficulty in the way which must be overcome before we can hope to accomplish much in this direction, namely: a lack of practical knowledge on the part of those to whom the children are intrusted for instruction.

The main features of economy of food can be combined in a pleasing manner with the regular class recitations and thus awaken thought and stimulate research on the part of the pupils, until the knowledge obtained will be diffused and some of the facts gradually work their way into the homes of those who stand in most need of them. When studying the digestive organs I have found it very beneficial to have bills-of-fare suited to a family in moderate circumstances brought in by several members of the class, and then have them discussed as to the relative merits of the articles of food mentioned therein, constantly bearing in mind the test laid down by Professor Atwater: "The cheapest is that which supplies the most nutriment for the least amount of money." Efforts should be made to ascertain the actually nutritive ingredients of food. For this purpose pupils may be led to prepare diagrams similar to those used in The Century; some may be placed upon the blackboard.

In connection with this subject timely instruction, or, rather, warning, may be given in regard to the habit of nibbling candy, burnt almonds, and peanuts during every hour in the day, to which many of the cases of headache on the part of school children can be traced, rather than to overwork.

Upon investigation I found from the books of a candy-store in the vicinity of a grammar school with an enrollment of seven hundred, that the weekly receipts for candy, gum, peanuts, etc., were fifty dollars, an average of seven and one-fifth cents to a pupil, which for forty weeks, or the school year, amounts to $2.85, a sum quite sufficient to purchase the required books for the year.

In calling pupils' attention first to the waste of money and next to the injurious effects upon the system, I request each one to bring in memoranda of articles purchased, and also to show what of value might have been bought for the same amount, as well as what may have to be spent for doctor's bills to cure dyspepsia and kindred ailments of which the foundation is being laid. Papers on the hygiene of the digestive organs are also brought before the class and fully discussed.

The care of the sick, especially the quality of food and its preparation, can be made very interesting. Geography furnishes topics for physiology. Thus in China and portions of India, rice; in Ireland, potatoes; in Scotland, oatmeal; and in the southern portions of the United States corn-meal and bacon, form a large part of the sustenance of the poorer classes. The muscular, wiry Arab crosses the desert on scanty rations. Compare the condition of the German and French peasants with the Italian lazzaroni.

To show the structure of the organs graphic illustrations with crayon and pencil and paper manikins, constructed by pupils, are valuable aids. Whenever practicable, the organs of inferior animals can be brought before the class.

SCHOOL-ROOM WORK—HOW—WHY.[1]

BY N. A. CALKINS.

III.

OBJECT-TEACHING.—FORM.

BEFORE proceeding to teach the pupils the characteristic features of *new forms*, introduced in the succeeding lessons, lead them to *reëxamine* those with which they have become somewhat familiar in previous lessons. This reëxamination may be conducted by placing before the class the *sphere*, *cylinder*, *cube*, *square-prism*, *square*, and *oblong*, and leading the pupils again to compare the *sphere* and *cylinder*, the *cube* and *square-prism*, the *square* and *oblong*, and in each case to state wherein those compared resemble each other and in what they differ. The manner of making these comparisons and statements may be similar to the following:—

The *cube* and the *square-prism* are alike in the *number of their sides*, both having six; they are alike in the *shape* of two faces of the prism, which are square, like the faces of the cube; they are alike in a part of their *edges*, all of which are of equal length on the cube, while eight are of a similar length in the prism. These forms *differ* from each other in the *shape* of a part of their faces: all of the six faces of the cube are square, and only two of the six faces of the prism are square; the prism has four *oblong faces*, and the cube has no oblong faces; all the *edges* of the cube are of the same length; this prism has eight short edges and four long ones. Lead the pupils to make similar comparisons with other forms.

These *reëxaminations* should be repeated from time to time after groups of new forms have been presented in lessons. But such examinations and comparisons should in *no case be made recitations* of facts previously learned. In each instance they should consist of actual observations by the pupils and of statements by them of what is then observed. *The work is to be done by the pupils*, the teacher simply directing as to *what shall be examined*,

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[1] Copyright, 1887, by N. A. Calkins.

and calling attention to mistakes made in their work, to be corrected by themselves.

TENTH LESSON. — HEMISPHERE.

Place before the class a *sphere* and *two hemispheres.* Lead the pupils to compare the sphere and hemisphere, noticing that one will *roll easily every way*, and that the. other will *stand firmly* on one side and will *rock* on the other side; that one is *evenly curved on all sides*, and that the other has *one evenly curved side* and a flat, or *plane*, *side;* that the plane face has a *curved edge* like the end of a cylinder. Also require the pupils to tell how a form like the one that will rock can be made from an orange, and how many of this form can be made from one orange. Place two hemispheres together and lead the pupils to observe, by comparing them with the sphere, that a hemisphere is *one half of a sphere.* Teach the term *hemisphere* from the blackboard.

Modeling the Hemisphere. — Let the pupils make the sphere, as directed in the first lesson of this series; then, holding the sphere in the hollow of the left hand, cut it in halves with a thin, stiff card. Or the clay-sphere may be cut in halves while it rests on the molding-board by means of fine wire.. Then let the clay hemispheres be compared with the models used.

Modeling the Cylinder. — As a preparation for modeling the cylinder, lead the pupils to observe that it *will roll forward and backward;* that it is curved one way. Tell them that they must roll the clay only forward and backward to make a cylinder; that while rolling the clay the ends must be struck on the molding-board frequently to make them flat.

ELEVENTH LESSON. — CIRCLE. SEMI-CIRCLE.

Place before the class a *cylinder*, a *hemisphere*, and pieces of paper cut in the shape of a *circle*, also other circular objects. Lead the pupils to compare the plane faces of the two solid forms, and to notice that each has the same shape; that their *edges are evenly curved;* that the pieces of paper have like shapes. Let the pupils point out like shapes on other objects; as, the end of a pencil, the flat faces of buttons, of pieces of money, the bottom of a cup, the clock face, etc. Teach the term *circle*, from the blackboard, as the name of this shape.

Semi-circle. — Let the pupils place the opposite edges of the circular pieces of paper evenly and then crease the fold. Direct them to open the folded circle and to notice whether the part on one side of the creased line is larger than the part on the other side; then to state *how much of the circle* is on one side of the line. When the pupils have discovered that the circle has been folded into two equal parts, or *halves*, teach the term *semi-circle* as the name of half of a circle.

TWELFTH LESSON. — CIRCUMFERENCE. DIAMETER.

Place in the hands of the pupils *circles* cut from paper. Direct them to point with the finger at the entire edge of the paper; to notice the evenly curved line that extends entirely around the circle. The teacher may draw a circle on the blackboard; pupils may try to draw circles on their slates. Teach the term *circumference* as the name of *the curved line that extends entirely around the circle.* The circumference determines the size or fixes the *boundary* of the circle. Let the pupils point out the circumference of several circular objects, as the cylinder, hemisphere, sphere, orange, etc.

Diameter. — Let the pupils fold the circles made of paper into halves, and notice that the creased line extends from side to side through the centre; direct them to open the folded circle and place the opposite sides so that the creased lines will meet, then to crease the new fold at right angles with the first one. Now lead the pupils to notice that the circle has two lines extending from side to side through the centre.

The teacher may draw a circle on the blackboard and draw lines across it to represent the creased folds in the circular paper. Teach the term *diameter* as the name of *a line extending from side to side through the centre.*

THIRTEENTH LESSON. — KINDS OF ANGLES. TRIANGLES.

Exercises on angles and kinds of triangles furnish excellent means for training pupils in careful and accurate observation, and for the formation of habits of continual attention which will become very useful in gaining subsequent knowledge. These exercises may be made very interesting to the pupils if they are properly trained to discover and to represent the different angles and triangles. The following lessons will indicate some of the ways in which the teacher may conduct them.

Give the pupils *narrow strips of paper* and teach them to fold the paper so as to represent *a right angle*, *an acute angle*, *an obtuse angle*. The teacher may draw each of these angles on the blackboard and request the pupils to represent them by folding the strips of paper. Lead them to compare the *right angle* with the *square corner;* the *acute angle* with the *sharp corner;* the *obtuse angle* with the *blunt corner.* Teach them that *acute* means *sharp;* that *obtuse* means *blunt.* Draw several angles of each kind on the blackboard and require the pupils to count and to tell how many angles there are of each kind. Let them also point out angles in different objects and name the kind pointed at. Let them draw each kind of angle, as requested.

Triangles. — Give the pupils pieces of paper in the form of *squares*, and of *triangles* with *one right angle*, with *one obtuse angle*, with *three acute angles.* Lead them to notice that some of the forms are *alike* in the *number of their sides;* that some are *alike* in the *number of their angles;* that some are *alike* in *part of their angles;* that some of the forms *differ* in the *number of their sides;* that some *differ* in the *number of their angles;* that some *differ* in the *kinds of their angles.*

Lead them to observe that every triangle *must have two acute angles;* and that a triangle *may have three acute angles;* that *no triangle has more than one right angle*, nor more than *one obtuse angle.* Teach them that these triangles are named from their angles; that the term *right angle*[1] *triangle* is a name for *the triangle with one right angle;* the term *acute angle*[1] *triangle* is a name for *the triangle with three acute angles;* the term *obtuse angle*[1] *triangle* is a name for *the triangle with one obtuse angle.*

Teach the pupils to represent each kind of triangle by folding paper; also to draw them and write the name of each under it.

Lead the pupils to observe that *two lines* will form *one angle*, thus: ⌋ ∟ ⦣; and that *two lines* will form *two angles*, thus: ⊥ ⟂; also that *two lines* may form *four angles*, thus: + ⌿. Let the pupils represent the manner of forming *one angle*, *two*

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[1] These *names* for triangles are readily associated with those for the *kinds of angles*, and they express all that is necessary for distinguishing the *kinds of triangles* correctly; hence they are adapted to elementary instruction in *form*.

angles, and *four angles* with two pencils or two sticks. Let them also draw lines to represent the same.

FOURTEENTH LESSON. — FIRST STEPS IN LENGTH.

Give the pupils several sticks, two of each different lengths. Request them to place together two sticks of the same length, two of another length, two of different lengths. Direct them to draw two lines of equal length, two of another length, two of different lengths.

Direct them to *fold* a strip of paper into *two* equal lengths; into four equal lengths; and to fold a strip of paper into *three* equal lengths.

Let them *divide* a strip of paper, by folding, into *two equal parts;* into *three* equal parts; into *four* equal parts; into *six* equal parts; into *eight* equal parts. Let them draw lines and *divide* them into *two*, *three*, *four*, *six*, and *eight* equal parts.

Measured Length. — Give the pupils *inch* cubes, or *inch* squares, and teach them to measure one inch, two inches, three inches, etc. Let them measure strips of paper, lines on their slates, etc.

THE HISTORY OF OUR COUNTRY: HOW TO TEACH IT.[1]

BY WILLIAM A. MOWRY.

III.

ANOTHER ILLUSTRATION.

"WELL, James, you were to bring us this morning an account of some incident in our early history. Have you one?"

"I have a story from the Indian wars. I like Indian wars."

"Do you mean that you like the wars or to read about them?"

"I mean, I like the stories."

"Perhaps they have a greater charm for you than they had for the actors in them."

"I have no doubt of that. Those must have been terrible times. I had no idea what an Indian's 'tomahawk and scalping-knife' meant till I read these dreadful accounts."

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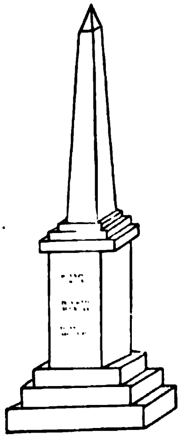
[1] Copyright, 1888, by William A. Mowry.

"Well, you may read your story. What is the name of the book which contains it?"

"It is from Barber's Historical Collections of Massachusetts."

The picture on the blackboard represents a monument in South Deerfield.



"The above is a northwestern view of the monument at Bloody Brook, erected in memory of Captain Lathrop and his men, who fell on this spot in an ambuscade of the Indians. This monument stands perhaps thirty or forty rods southerly from the Congregational church. Southeasterly from the monument is seen Sugar-Loaf Mountain, a conical peak of red stone about six hundred and fifty feet in height. In 1835 the one hundred and sixtieth anniversary of the destruction of Captain Lathrop and his men was commemorated in this place. The Hon. Edward Everett was appointed orator for the occasion, and General Epaphas Hoyt, of Deerfield, was appointed to make the address at the laying of the corner-stone for the monument. About six thousand persons were present on this occasion. About forty years after Captain Lathrop and his men were killed a rude monument was erected to their memory, but the different occupants of the soil removed it so many times that it was a matter of uncertainty where he or his men were buried. In 1835 the committee of investigation, guided by the tradition of some aged people, found the spot where he and about thirty of his men were interred; the grave was just in front of the dooryard of Stephen Whitney, Esq., and about twenty feet northwest of his front door. Their bones were in a state of tolerable preservation, but fell to pieces on exposure to the air. A grave, probably containing the bones of ninety-six Indians who were slain on that day, was likewise found by accident about the same time, nearly one hundred rods west of the road leading from Bloody Brook to Conway, by Mr. Artemas Williams, and a little more than half a mile southwest of the grave of Lathrop.

"The monument is six feet square and about twenty feet in height, and is constructed of marble. On its completion an address was delivered at its foot by Mr. Luther B. Lincoln, of Deerfield. The following is the inscription on the monument: —

On this ground Capt. Thomas Lothrop and eighty-four men under his command, including eighteen teamsters from Deerfield, conveying stores from that town to Hadley, were ambuscaded by about 700 Indians, and the

Captain and seventy-six men slain, Sept. 18th, 1675 (old style). The soldiers who fell were described by a contemporary historian, as " a choice company of young men, the very flower of the County of Essex, none of whom were ashamed to speak with the enemy in the gate."

> **" And SANGUINETTO tells you where the dead**
> **Made the earth wet, and turned the unwilling waters red."**

This monument, erected August, 1838.

" The bearing and distance of the grave of the slain (south twenty-one rods) is inscribed on the monument, and a stone slab placed on the spot.

" In order to defend the frontier settlements from the Indians in Philip's war, a considerable number of soldiers were posted at Hadley, and it became necessary to procure provisions and forage for their subsistence. The Indians having burnt the principal part of Deerfield, it was abandoned by the inhabitants. Their grain, consisting of about three thousand bushels of wheat, remained stacked in the fields, having escaped the conflagration. Determining to avail himself of this supply, the commanding officer at Hadley detached Captain Lathrop and his company, with a number of teams and drivers, to thrash it and transport it to headquarters. Having thrashed the grain and loaded his teams, Captain Lathrop, on the eighteenth of September, commenced his march for Hadley. As no Indians had been seen in the vicinity, he did not probably apprehend any danger."

" Where is Bloody Brook ? "

" It is in the town of Deerfield, in western Massachusetts. Sugar-Loaf Mountain is just upon the west bank of the Connecticut River. I have been there, and the view from the top of the mountain is beautiful. But before I went up the mountain I saw this monument, and I could not help thinking all the time I was on the mountain about poor Captain Lathrop and his men."

" In what war did this terrible massacre occur ? "

" In King Philip's War; and the book says that Philip had a 'seat' on Sugar-Loaf Mountain; but I cannot understand what he had to do there. I thought his 'seat' was on Mount Hope, in Rhode Island."

" Yes, so it was. His old home and the home of his fathers was only a short distance from Mount Hope. But the war was general through New England. You remember that many places were burned by the Indians; as, Providence, Medfield, Deerfield, and others. Without doubt King Philip was often in other parts of New England, planning for the contest and encouraging his forces."

"I have brought another book which gives an account of the death of King Philip, and my brother John would like to read it, if you have time."

"Well, John, if it is not too long. What is the name of the book?"

"It is The Story of the Mount Hope Lands, a capital book, written by Mr. W. H. Munro. I have read it all through. It is a history of Bristol, Rhode Island."

"John may read the extract."

"The assaulting company was made up both of Indians and Englishmen. They were directed to approach Philip's camp as silently as possible, and not to show themselves until daylight. Church rightly conjectured that the hunted band would rush into the swamp as soon as the alarm was given, and therefore placed a part of his company in ambush behind the trees, an Indian and an Englishman being placed together. Philip was relating to his friends a dream which had disheartened him in the night. The dream had placed him in the hands of his foes, and it seemed to him to presage his speedy end. At this moment one of his followers happened to glance toward the spot where two of their enemies were concealed. The Englishman saw the glance and, thinking himself discovered, fired his gun. The Pokanokets, without resisting, at once plunged forward to escape, and Philip rushed straight upon two of the party in ambush. The Englishman first aimed at the chieftain, but his gun missed fire; his companion, Alderman, one of the Seaconnet tribe, fired, his bullet penetrated the heart of Philip, and the terrible warrior fell forward upon his face in the mire of the swamp.[1] He was instantly dragged forth, and the body was identified from his scarred hand, which had been badly torn some years before by the bursting of a pistol. His head was afterwards cut off, as was also the hand, and the latter was given to Alderman as a trophy. This hand was preserved in a pail of rum and exhibited by its owner throughout the colonies. The headless body was quartered and hung up to rot above the ground. As he had caused many an Englishman's body to lie unburied, so his exulting captors determined that not one of his bones should be buried."

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[1] In 1876, the two hundredth anniversary of Philip's death was observed at Bristol with appropriate ceremonies, under the direction of the Rhode Island Historical Society. On the summit of Mount Hope a bowlder monument, erected in 1876, bears the inscription:—

"KING PHILIP,
August 12, 1676, O. S."

Beside Cold Spring a massive block of granite records that

"In the Miery Swamp, 166 feet W.S. W
from this Spring, according to tradition,
King Philip fell, August 12, 1676, O. S."

"This war, under the leadership of King Philip, threatened to exterminate the white people of New England. Of course when he was killed and the war closed there was a sense of great relief. The savage custom of quartering the body of an outlaw and exposing it to view in different places was common among the nations at that time. It was a period of many barbaric customs, which happily have since passed away.

"Now, our time has expired, or I would call your attention to other scenes in this terrible war. Just after the death of King Philip Captain Church captured Annawon and his men in the night by crawling down a steep rock, called ever since Annawon's Rock, and surprising the Indians, who surrendered without firing a gun. You will find the account very quaintly given by Captain Church himself in his Indian Wars.

"Let me call your attention to the list of books which you will see upon the blackboard, concerning King Philip's War and that early colonial period. Among the more interesting you will find Church's Indian Wars; Morton's New England Memorial; Staple's Annals of Providence; Fessenden's History of Warren, R. I.; Arnold's History of Rhode Island; Barry's History of Massachusetts; Mather's Magnalia; Trumbull's History of Connecticut; Morse's History of New England; Hutchinson's Massachusetts, and Hubbard's History of Massachusetts. Many of these books are now rare, but can be found in our best libraries. They describe a period of great interest to all Americans. Those were planting days. We reap the harvest.

"Let us never forget what extreme hardships our fathers endured in the settlement of this country, in the war for independence, and in the war for the Union. We have a grand inheritance, and we ought to be good citizens, love our country and our government, and do all we can to keep the government pure and strong."

METHODS IN GEOGRAPHY.[1]

BY LARKIN DUNTON, LL.D., AND MISS L. T. MOSES.

VII.

NATURE LESSONS.

First Year's Work.

THE course of lessons on place was designed to fit children to understand maps, their use, and their limitations, and to make them familiar with direction and the language expressing it. The work on nature is to furnish the mind of the child with the elements from which he shall be able to picture in imagination the various phenomena of the earth, the air, and the heavens, as they are exhibited in their various forms over the whole wide earth.

The possibility of picturing natural scenery that has not been observed is a direct result of having accurately and often observed natural scenery at home; hence comes the necessity of intelligently directed observation, by the children, of the conditions of nature around them, and this observation must be so frequent as to form in each child a habit of seeing what is around him, if we wish him to be able to form a clear and vivid picture of scenes in other parts of the earth.

The subjects for all primary lessons in this department of study should be strictly confined to the phenomena which the child can observe himself. The things that are present to the child and that may be used as objects of observation are the things seen on the earth, in the air, and in the heavens.

The general subject of the earth includes the following special subjects: The soil with its products; the shore with its outlines of land and sea; the surface of the land with its hills, valleys, and plains; the great sea with its variations of wave and color, and the land waters in their different forms of rill, brook, and river, pond and lake. Any or all of these may be fit subjects for lessons, if only they are where the child can see them daily or even occasionally.

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[1] Copyright, 1887, by Larkin Dunton and L. T. Moses.

The air and the heavens offer to all, wherever the school may be situated, subjects for observation. The air with its forms of moisture, dew and frost, rain and snow, mist and fog, and the clouds, so constantly changing in color, form, and movement — all these and the wind with its direction and rate of motion, if carefully and continuously observed, will give the child the elementary notions which will serve him well in his study of atmospheric conditions in other countries.

The sky with its blue vault and the bodies that cross it — the sun, the moon, and the stars — are fit subjects for observation lessons, and will smooth the pupil's path over the rough road that leads him to a knowledge of astronomical geography, so much dreaded by both pupil and teacher.

The subjects for the first lessons should be selected from those natural objects which afford an opportunity for daily observation; and among these objects those that are different at different times should be chosen; as the interest in watching will be greater, when the object is liable to change. Among the most valuable acquisitions from these lessons is the habit of observation. So the first lessons should be such as will help to form this habit. Among the objects which offer continual change and are almost constantly present, are the clouds, the dew, or, in cold weather, the frost, the wind and the sun, the moon and the stars. The lessons on these subjects should be given in the order in which they are named.

When all these have been observed almost daily for several weeks, the pupils should have formed a habit of observation, and the lessons on rain and snow, mist and fog, and the forms of land and water, should follow. With children entering school the logical order in a series of lessons is of less importance than the formation of correct habits; still, in the order given above, the lessons are mainly in the order of the air, the heavens, the earth; though to the child the clouds are as truly heavenly bodies as the sun, the moon, or the stars are.

In the treatment of the subject it has been decided to give the method of conducting one lesson with tolerable fullness, and to give the points to be observed in the remaining lessons. The lesson on the clouds will illustrate the method of giving all the lessons.

The teacher chooses for this lesson a time when there are cumulus and strata-cumulus clouds in the sky; these clouds are likely to be present late in the afternoon. The children are sent to the windows, and are directed to try to look at the clouds so well that they can shut their eyes when they come back to their seats and still see every cloud. Not all little children can do this; but after some practice all will succeed. The pupils are allowed to stand at the window and look at the clouds for about a minute. Then they are called back to their seats, and directed to shut their eyes and try to see the clouds. At the direction of the teacher, the children open their eyes. The teacher now ascertains how many of the pupils think that they can see the clouds just as they are, even with closed eyes. In case a large number fail to do this, the children are again sent to the window to look; but probably this will not be necessary. The pupils are now asked to think of the colors of the clouds, and different pupils tell what colors they have seen. There will be a tendency here to tell of colors seen at other times; but it will be better to confine their attention to just the colors seen to-day. When these have all been told by the children, the teacher says that she hopes to see some beautiful colors to-night just after sunset, and that all who think to look at them may tell her to-morrow what colors they see.

The children are now sent again to the window to see if there are any colors not mentioned by them at first, and they are allowed to tell what the colors are, if any have been omitted.

They are now directed to find the very tiniest cloud in the sky, and the very largest one. After they have looked till they are sure they have found these, they return to their seats, and show with their hands how large the smallest cloud they saw was, and how large the largest one was. After this they compare the size of each with some other object; thus the child says: "The smallest cloud I saw was no bigger than my hand." This comparison gives definiteness to the idea of the size of an object, and helps the teacher to know how fully the child saw, and also helps her to correct any wrong notions.

The children are sent once more to the window to verify their observation in regard to size; and, afterwards, to see if the clouds look like anything else they have ever seen. When they have returned to their seats, the teacher says some of the clouds looked so soft and thick and white that she thought they looked like ——. The children are ready here to suggest snow, wool, feathers, foam, and various other things that they have seen.

The teacher tells them that other persons have thought the clouds look like the things they have thought them like, and because they look like wool they are often called fleecy, since the whole of the wool on a sheep is the fleece. The teacher says she thinks the white, fleecy clouds are very beautiful, and the pupils tell what kind they think very beautiful.

The children are now told to think of the shape of the clouds, and the teacher says she sees one that seems to have wings and to be flying across the sky. The children think that must be like a bird; and the teacher says she has often seen other animals in the clouds. The children look again to find whether there are any other animals in the clouds now, and some think there is a dog, a lion, a dragon, a sheep, or a bear, as the case may be. The teacher says it is quite wonderful how many things one can see in the clouds, if one only looks at them often, and says that she has seen almost everything because she has looked so many times. The pupils resolve that they will try to find things in the clouds whenever they are out-of-doors. Because the teacher tells them that they are more likely to see things in the clouds at sunrise and at sunset, the pupils resolve that they will try always to look at them at those times, so that they too may see the lovely things the teacher has seen.

It has been found better not to have the children tell of the animals and other things they have seen in the past in the clouds; because their imaginations are so active, they will not always distinguish between what they actually have seen, and what they would like to have seen, because a playmate has seen it. With young children care must always be taken by the teacher in the matter of their statements.

This work of thinking and telling what the beautiful things of nature are like is a valuable means of developing and training the imagination and of helping the children to be, if not poets and seers, ardent lovers of the beauty of the imagery created by others, and also of developing their power of loving and appreciating beauty both in nature and art. The children sometimes give trivial analogies; but they can be made to feel that a thing of beauty like a cloud must not be compared with anything not beautiful in itself; and so the imagination is trained and the mind is led to demand beauty for beauty in all its thoughts of nature.

For the last time the pupils are sent to the windows to see what the clouds are doing; and their movement is easily seen. The children return to their seats and indicate the direction, and afterwards the rate of motion, with their hands.

The children are led to see that the clouds give us rain, and in the hot summer days keep the burning sun from us, and so are very useful to us as well as to the plants and animals.

As a summary of the lesson, the children, with the aid of the teacher, remember that the clouds will be bright colored at sunset, and that they are to look and tell the teacher in the morning all the colors they can see. They also tell that they are going to try to find a smaller cloud than they did in the lesson and a larger one too; that they mean to find a cloud moving faster or slower than those they saw in the lesson; and that they will try to find some of those lovely things the teacher has seen in the clouds.

Some appropriate selection for children of this age, a poem or rhyme, should be read at the end of the lesson or sometime after the lesson is given. This helps the children to understand and love poetry. It also pleases them to find that they have the same thoughts as people who write books. Of course, if there is in the poem any likeness between the clouds and another beautiful thing that the children have not given, the teacher will lead them to think of it during that part of the lesson. Children of this grade are delighted with the following poem: —

THE CLOUDS.

On the grass in the meadow a little boy lay
  With his face turned up to the sky,
And he watched the clouds as far away
  They lazily floated by.

"I love you, clouds," the little boy said:
  "You look so pretty and white,
And you keep the sun from my face and head
  When he shines too fierce and bright.

"Sometimes you look like a flock of doves
  Flying far, far away,
Or feathers plucked from their downy breasts,
  Or little white lambs at play.

"Sometimes there are heaps of foam and snow,
  And fishes, dogs, and sheep,
With bridges and other things that I know,
  As over the heavens they sweep.

"And sometimes faces are peeping out,
Angels' faces they seem,
And yards of laces spread about
As thin as a fairy dream.

"Sometimes you look like the sails of a ship,
With the blue sky for the sea.
I am lonely, clouds, and I love you so!
Do come and play with me."

The white clouds heard as they floated by,
And they thought they would like to go
And play awhile with the little boy
Who seemed to love them so.

So they gathered thickly over his head,
And before he looked again
The little clouds came tumbling down
In a pelting shower of rain.

The thirsty buds and the drooping flowers
Were glad that the shower had come;
But the little boy jumped to his feet and ran
As fast as he could for home.

Next day the little boy looked again,
And said as the clouds sailed by:
"I love you, clouds, but I love you best
When you stay away up in the sky."

The work indicated in the lesson given above may be divided into three or four lessons at the option of the teacher. Indeed, this division of the work will help the teacher to begin that course of observation with the pupils without which these lessons are simply pretty, interesting exercises for the pupils, but not really educational in the best sense of the term. To make them truly educational, the observation must be continued for months. This can easily be done by attention on the part of the teacher. At first the teacher directs the children every day to look at the clouds, and gives them a minute or two for the description of what they see; then she directs them, when there is any especial beauty to be seen; and, finally, she stops directing and asks for observations which the pupils have made. Perhaps for little children the first step will be the only possible one. The teacher can judge of that by careful observation of the habits of the class.

DRAWING IN PRIMARY AND GRAMMAR SCHOOLS.[1]

BY WALTER S. PERRY,

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VI.

APPEARANCE OF FORM.

THE paper of this series directly preceding the one here presented contained a general description of the three fundamental divisions of drawing, with some work in detail explanatory of the first division, namely: that relating to facts of form. This paper will relate wholly to the general appearance of objects, or, in other words, to free-hand perspective. But the latter term may, if used, cause some to feel that the subject is growing too deep for public school scholars.

But let us look at one point at a time and see if the pupil cannot be led to discover through good teaching many things that will enable him to draw readily what he sees, and to prove all the necessary rules that may afterward be formulated.

We must not begin such work (perspective) by talking to the pupils about planes, vanishing points, etc. It will be quite enough at first to lead them to see that objects really change their appearance as their position is changed in reference to the spectator, or as they are moved at a greater or less distance from the eye. Allow the pupils to handle objects, a cylinder, a tumbler, or any geometric form, and place it above, below, and opposite the eye, or turn it about and tell what they think they see from each point of view, how one view differs from another, what shows in one view, and what in another. It is not necessary in this practice that the pupils should tell what they think should be drawn, nor should they be puzzled by being told. They should simply observe that objects change their appearance as their position is changed. Is this too simple a thing? No! Many pupils, after much instruction, will draw what they think or know a thing to be in reality, without observing that the part they insist upon drawing is perhaps entirely out of sight. Observation must be emphasized before rules and technicalities are introduced.

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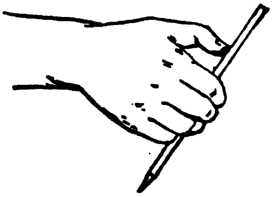
[1] Copyright, 1887, by Walter S. Perry.

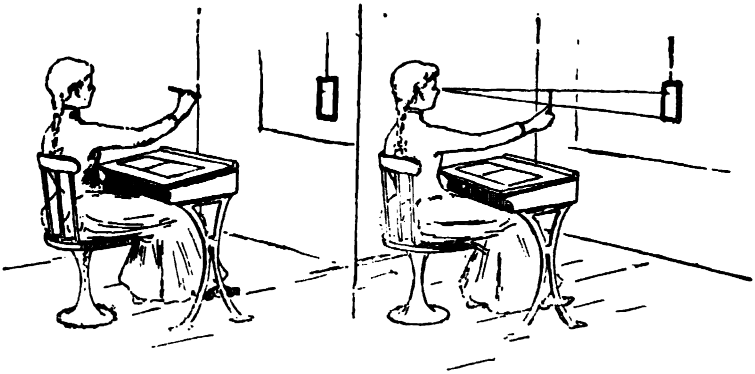
This done, or even before, if it seems better, the pupils should be taught how to measure with the pencil held at arm's length, not to gain the *size* of the object, but its general *proportions*. To do this well, only one thing should be taught at a time. (1) Hold the pencil lightly in an upright position in such a way that the thumb shall be left free to move up and down on the pencil. This can be done by holding the pencil near the ends of the three first fingers, with the little finger on the opposite or inner side of the pencil to assist the thumb in keeping the pencil upright, while the thumb is being moved along the pencil.



This should be practiced until the pupils can hold the pencil steadily in one position and at the same time move the thumb easily. (2) The pencil should be held at arm's length between the eye and some simple, upright object, like a ruler, which the teacher may hold. Practice this until, with one eye closed, the pupils can hold the pencil directly between the open eye and the ruler so as to hide it from view. Insist upon the closing of one eye. (3) Turn the ruler to a horizontal position, and require pupils to turn the pencil without bending the arm or wrist. Turn it about in other positions, always keeping one eye closed and the pencil at *arm's length*. This will require quite a little practice. (4) Have the pupils find the *apparent* length of the ruler, and those in the back seats will discover that it does not appear as long to them as to those nearer the object. Suggest that when school is over they measure a man, a horse and carriage, a house, and other objects at different distances and see how high or large they *appear*. Suggest that they stand about four feet from a window-pane and observe how much space on the glass a house, tree, or other object occupies. In other words, how large these objects should be made compared with each other if all were to appear in a picture the size of the pane of glass.

Before giving further work, the pupils should be allowed to think these things over and to test them for themselves, and thus to comprehend somewhat the meaning of appearance.

Having become familiar with the handling of the pencil, the pupils should next determine the *proportion* of simple objects. Stand a waste-basket on the desk, and ask the pupils how many think the width across the top to be greater than the height; how many think the height greater than the width. Now have the pupils measure carefully with their pencils, first cautioning them to sit erect, well back in their seats, and to keep the same position of head, body, and hand till all measurements are made and compared, remembering that if the pencil is extended farther from the eye for one measurement than for another, or if the head is moved, the result cannot be correct. The illustration shows the position and method of measuring.



The teacher should now draw long narrow oblongs upon the blackboard, one in front of every two rows of pupils, and have the pupils measure the apparent width and see how many times it is contained in the height. Keep the thumb fixed for the width, and, turning the pencil, move it up as many times as necessary to determine the proportion. Measure the oblongs afterward, and allow the pupils to see whether their proportions were correct. Explain that it is necessary to learn to measure with the pencil held at arm's length, as it would be inconvenient and also impossible to measure by applying a rule to all objects that the pupils may draw later. In the same way the proportions of a slate hanging against the wall may be determined, or a door panel, clock, or any other object may be measured for the purpose of determining the width as compared with the height. The pupil for the present stage of the work must stand or sit directly opposite the object being measured.

The pupils are now ready to study a circle with the idea of drawing its appearance. But each pupil can best understand what this appearance is if he studies, not a paper circle or a solid cylinder, but a hollow cylinder made of paper. Each pupil can quickly make one if he is provided with a pin and a piece of paper about the size of an ordinary sheet of note-paper, but perhaps not quite as wide. Roll the paper till the edges overlap each other about one half of an inch, and by holding the edges firmly at the center with the thumb and finger of the left hand, the paper can be easily pinned if the pin is pushed through the paper but twice —once through from the outside and back. With a little manipulating the paper can be formed into a good cylinder. Do not omit this exercise; it is very important, and the cylinders can be kept for future use.

The pupils should now, with one eye closed, practice holding the cylinder at arm's length and in three positions as the teacher counts: (1) Hold the cylinder with the top exactly on a level with the eye. Say to the pupils: Move the cylinder from the desk upward slowly until such a point is reached that you cannot see into it, and stop; this is the level of the eye. (2) Move the cylinder downward about two inches. (3) Two inches more. Repeat. Rest. Now move the cylinder to position 1 again. Can you see into it? Position 2. Can you see into it now? Can you see very far into it? Position 3. How does the top appear now compared with No. 2? Can you see the whole of the upper edge? In some such way lead the children to draw what they think should be drawn to represent just the upper edge of the cylinder when on a level with the eye, a little below the eye, farther below the level of the eye, etc.

When the pupil once sees or discovers that a circle will appear as a straight line when on a level with the eye, and as a very narrow ellipse when a little below, and a wider ellipse when farther below, he has a picture in his mind that will be of some value to him. The cylinder may be moved above the eye with the same results, or held horizontal and moved to the left or right from a point directly opposite the eye, and many questions may be asked to fix the appearance. When the pupils are required to draw the whole cylinder, they can be led to see that the bottom being farther below the level of the eye than the top, it will appear wider.

The next step is to lead the pupils to measure the apparent width of a circle from front to back and compare it with the length from left to right. Some large object should be selected for this exercise, like a waste-basket or pail. It should be placed slightly below the level of the eye, and the pencil should be held in an *upright* position. The apparent width from front to back should be determined, and this width compared with the width from left to right. The width from front to back may be found to be one eighth, one sixth, or one fourth of the width from left to right, and this will determine the proportion of the ellipse. (See illustrations in last paper for appearance of cylindrical objects.)

. This same subject will be continued in the next paper.

LANGUAGE LESSONS AND EXERCISES.[1]

BY L. W. RUSSELL, A.M.

IX.

THE ADVERB.

CHILDREN recognize at an early period of their progress in speech a demand for adverbial modifiers. They employ them frequently, but not always wisely. The adverbs which have reference to place, manner, and time come first into use, while those which relate to cause, inference, emphasis, and those of still more obscure influence, are adopted later, as the child's development in thought and expression calls for them.

The errors most common in the use of these modifiers are similar to those already noted in a previous number in respect to adjectives. They may be briefly classified as follows: —

(*a*) The substitution of an adjective for an adverb; as, He speaks good, for, He speaks well.

(*b*) The substitution of an adverb for an adjective; as, She looks beautifully, for, She looks beautiful; The apple tastes sweetly, for, The apple tastes sweet.

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[1] Copyright, 1887, by Eastern Educational Bureau.

(*c*) Too frequent and indiscriminate use of certain adverbs, such as "nicely," "finely," "splendidly," "beautifully"; as, She sings nicely, dances nicely, plays nicely, skates nicely, recites nicely; I slept nicely; I enjoyed myself nicely; I got home nicely; They were nicely entertained; He is improving nicely, etc.

(*d*) Using exaggeration in the modifications; as, speaking of things as "wonderfully" well done, when they are simply "well" done; speaking of something as "remarkably" true, when it is only "true."

(*e*) Using adverbs which have no proper application to the words modified; as, You are "awfully" good; That is a "dreadfully" pretty bonnet.

(*f*) Misplacing the adverb so as to make it modify what was not intended, or to leave the matter in doubt; as, He only washed my face; He has not only bought a horse, but also a carriage.

(*g*) The employment of two negatives to express a negation; as, I cannot work no more; He will never be no better.

(*h*) The improper use of "how" and of "no"; as, He said how he would go, for, He said that he would go; I will go whether you do or no, for, I will go whether you do or not.

Errors in the use of adverbial phrases and clauses, especially in regard to position, are frequent, but their character and correction will be suggested by the work done with simple adverbs.

TEACHING. — Teach the nature of the adverb: —

(1) By bringing to the attention of the pupils the fact that people not only do various actions, but that they do them in different ways, at different times, and in different places. Thus, rapidly or slowly, gently or harshly, pleasantly or disagreeably, peacefully or angrily, calmly or excitedly, and so on; that we act promptly or tardily, soon or late; that something was done yesterday, that it is in progress now, or that it will be done soon or to-morrow; that we may meet a person often, or frequently, or rarely, or never; that we should always speak the truth and never tell lies.

Thus bring out the easily perceived modifications of common actions, and inform the pupils of the *name* of the modifying words.

(2) In a similar way direct attention to modifications of qualifying adjectives and of adverbs themselves.

In the beginning, to make the matter clear to the pupils, it may be advisable to illustrate; as, by moving an object slowly, then rapidly; by writing carefully, then carelessly; by speaking softly, then loudly. Also, by showing and comparing things which have distinctly seen differences of the same quality; as, two exercises in writing—one may be "well" done, another "remarkably" well done; one orange, as tasted, may be "sweet," another "very" sweet.

EXERCISES.

(1) Write a declarative sentence to tell "when" birds sing; one to tell "how" they sing; one to tell "where" they sing.

Write sentences to tell "when," "where," and "how" the boy reads.

Write an imperative sentence telling a boy "how" and "when" to shut the door.

Tell "where," "how," and "when" the clouds move.

(2) Each pupil make a sentence for others to change by the use of adverbs; as, Henry skates; Henry skates early and late; Henry skates gracefully, etc.

(3) Separate the following adverbs into lists: those which tell "how"; those which tell "when"; those which tell "where": Swiftly, kindly, often, there, frequently, everywhere, soon, patiently, never, yonder, carefully, daily, instantly, harshly, bravely, well, now, presently, anywhere.

Write a sentence for each of the adverbs named.

Use "nicely," "splendidly," and "beautifully" in sentences.

Each pupil write a sentence of either kind, leaving a place blank for an adverb. Change papers and fill the blanks; as, How — the ship sails: How gracefully the ship sails.

(4) Select an appropriate adverb from the following list to fill each of the blanks below: Much, little, greatly, enough, somewhat. I am — disappointed. I — thought that this would happen. He was — disturbed. He was well — to play on the street. (Extend this exercise.)

Use "certainly," "truly," "surely," "yes," and "undoubtedly" as adverbs of emphasis.

(5) Use "first," "secondly," "thirdly," etc., to denote order.

Use "once," "twice," "thrice," etc., to denote how many times.

NOTE.—Some of the above exercises may be too difficult for beginners. Do not go beyond the fairly easy comprehension of the pupils. An elementary course should not be exhaustive.

COMPOSITION EXERCISE.

The preparation is to be made by the teacher's naming some place as the scene for a description. For instance: A pond in winter covered with smooth ice.

The pupils are to think about it, and, in turn, name something about the pond or connected with it, which they can think of as of interest. These are to be taken down as the rough material for the story. The items might stand somewhat as follows: —

The pond — glare ice — boys and girls — bright skates — moonlight — a fire of brush and stumps — sleds from the hillside — woods on one side — skating by the "Dutch roll" — a fall — hole in the ice — rails — a rope of handkerchiefs and neckties. Shouting — a brave boy — baked apples — singing — a race — seeing stars — ten o'clock — going home.

An exercise written out from such notes will show some lifelike pictures, and gives the imagination valuable training.

METHODS OF TEACHING ARITHMETIC IN PRIMARY SCHOOLS.[1]

BY LARKIN DUNTON, LL.D.,
Head Master of the Boston Normal School.

XIII.

THE MULTIPLICATION TABLE APPLIED TO WRITTEN WORK.

THE written sign for multiplication is an inclined cross, thus, ×, and means time or times.

If we should write down the numbers from 1 to 10, and ask the pupils to use them successively as multipliers of a given number, we should by this means assist them to reach the results by the successive additions of the number to itself. However necessary this order may be in the development of the table and for its thorough comprehension, still a practical mastering of the same, a ready working knowledge of it, demands its application out of this order.

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[1] Copyright, 1887, by Larkin Dunton.

In order to fix in the minds of pupils that they are always working for results, and not merely for practice, write down the numbers from 1 to 10 in the following order: —

1, 2, 5, 8, 3, 7, 4, 9, 6, 10.

Now, partly for the purpose of introducing variety into the work, and partly for the sake of review, connect both addition and subtraction with exercises in multiplication. The beginning of the work of multiplying with two may be as follows: —

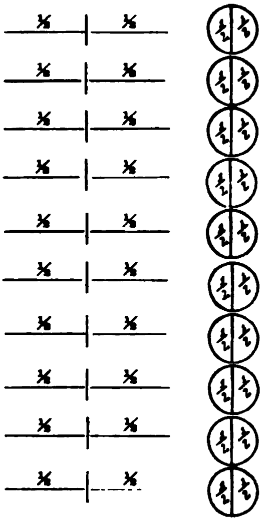
$1\times2+1=3.$
$1\times2-1=1.$
$2\times2+1=5.$
$2\times2-1=3.$
$5\times2+1=11.$
$5\times2-1=9.$
$8\times2+1=17.$
$8\times2-1=15.$
$3\times2+1=\ .$
$3\times2-1=\ .$
$7\times2+1=\ .$
$7\times2-1=\ .$
$4\times2+1=\ .$
$4\times2-1=\ .$
$9\times2+1=\ .$
$9\times2-1=\ .$
$6\times2+1=\ .$
$6\times2-1=\ .$
$10\times2+1=\ .$
$10\times2-1=\ .$

Substitute the numbers 2, 3, etc., to 10, for 1 in the above exercises, as the numbers to be added and subtracted, and you have 200 examples in multiplication by 2. Now substitute the numbers 3, 4, 5, etc., to 10, in place of 2 in the above examples, as the numbers to be multiplied, and you have 1,800 examples in multiplication. With one half of these are connected examples in addition, and with the other half examples in subtraction.

In assigning work of this kind it is only necessary for the teacher to write or dictate one or two examples of a kind; for the pupils can readily invent the rest of the series up to 20 examples.

When the pupils are familiar with the multiplication of whole numbers, as indicated above, the multiplication of fractions may be introduced with profit. If the treatment of fractions is to be easy and pleasurable, the pupils must be made entirely familiar with fractions themselves, as well as with the mode of expressing them; and for this purpose the application of the multiplication table furnishes an excellent opportunity. We will begin with the representation and multiplication of halves.

That one whole is equal to two halves may be illustrated by the actual division of a piece of paper, an apple, etc., into two equal parts. Then the same may be illustrated by dividing a line or a circle. As a result of the treatment of lines and circles in this way, the following work will appear on the board and on the pupils' slates: —



$1=\frac{2}{2}$.

$2=\frac{4}{2}$.

$3=\frac{6}{2}$.

$4=\frac{8}{2}$.

$5=\frac{10}{2}$.

$6=\frac{12}{2}$.

$7=\frac{14}{2}$.

$8=\frac{16}{2}$.

$9=\frac{18}{2}$.

$10=\frac{20}{2}$.

It is only necessary to tell the pupils that half is written thus, $\frac{1}{2}$, and that the number of halves is shown by the figure above the line. The method of writing fractions needs much practice on the slates.

When the children have become familiar with the meaning and representation of halves, they may perform the following series of examples: —

$1+\frac{1}{2}=\frac{3}{2}$.
$1-\frac{1}{2}=\frac{1}{2}$.
$2+\frac{1}{2}=\frac{5}{2}$.
$2-\frac{1}{2}=\frac{3}{2}$.
$5+\frac{1}{2}=$
$5-\frac{1}{2}=$
$8+\frac{1}{2}=$
$8-\frac{1}{2}=$
$3+\frac{1}{2}=$
$3-\frac{1}{2}=$
$7+\frac{1}{2}=$
$7-\frac{1}{2}=$
$4+\frac{1}{2}=$
$4-\frac{1}{2}=$
$9+\frac{1}{2}=$
$9-\frac{1}{2}=$
$6+\frac{1}{2}=$
$6-\frac{1}{2}=$
$10+\frac{1}{2}=$
$10-\frac{1}{2}=$

These exercises may be increased to almost any extent by adding and subtracting more than $\frac{1}{2}$.

A preparation for division may be made by orally questioning the children in this way: How many whole ones in $\frac{10}{2}$? How many whole ones and halves in $\frac{15}{2}$?

In a similar manner may thirds, fourths, etc., to tenths, be treated.

The practice of beginning the work in multiplication by committing to memory a ready-made multiplication table cannot be too strongly condemned. But if the pupil writes down the facts in tabular form as fast as he learns them, he will construct for himself the following table, designated as Chart XII. This will not only serve to recall the facts, but will, at the same time, be a means of teaching the facts intuitively.

1	2	3	4	5	6	7	8	9	0
2	4	6	8	10	12	14	16	18	20
3	6	9	12	15	18	21	24	27	30
4	8	12	16	20	24	28	32	36	40
5	10	15	20	25	30	35	40	45	50
6	12	18	24	30	36	42	48	54	60
7	14	21	28	35	42	49	56	63	70
8	16	24	32	40	48	56	64	72	80
9	18	27	36	45	54	63	72	81	90
10	20	30	40	50	60	70	80	90	100

That five times four are twenty may be shown in this way: Counting down the chart at the left to 4 are four rectangles; at the right of these are four; and so on to the row beginning with 5 in the upper row. That is, 5 fours are 20. If now we count the rectangles along the top row from 1 to 5, we find five in the row; below these is another row of five; and so on to the row beginning with 4 in the left-hand column. That is, four fives are 20.

In this way we obtain an intuitive knowledge that 5 fours are 20 and that 4 fives are 20. In the same way all the facts of the multiplication table may be demonstrated. Such demonstration will lay the foundation for the fact, to be learned by-and-by, that the product is not affected by the order of the factors.

This table is well fitted to teach the resolution of numbers into their factors; for if the children know that

$6\times4=24$,	They	$24=6\times4$;
$4\times6=24$,	must	$24=4\times6$;
$3\times8=24$,	also	$24=3\times8$;
$8\times3=24$,	know that	$24=8\times3$;

and every fact in multiplication should be followed by the corresponding fact in factoring. This is an excellent preparation for division. So also is the changing of fractions to whole numbers; for example: $\frac{9}{2}=4$ and $\frac{1}{2}$; $\frac{17}{3}=5$ and $\frac{2}{3}$.

In order to prepare the pupils for the work of multiplication when dealing with larger numbers, they should here be taught to multiply numbers consisting of tens and units. The following are illustrations of the work.

$$\begin{array}{l}3\times24=\quad.\\3\times20=60.\\3\times\ 4=12.\\\hline3\times24=72.\end{array}\qquad\begin{array}{l}4\times18=\quad.\\4\times10=40.\\4\times\ 8=32.\\\hline4\times18=72.\end{array}\qquad\begin{array}{l}8\times12=\quad.\\8\times10=80.\\8\times\ 2=16.\\\hline8\times12=96.\end{array}$$

The written work in multiplication at this stage is limited. We can, however, use the following series of numbers from Chart XIII: —

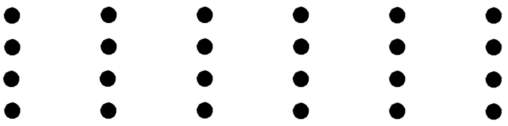
a, *b*, *c*, *d* by 2;	*a*, *b* by 5;	*a* by 8;
a, *b*, *c* by 3;	*a*, *b* by 6;	*a* by 9;
a, *b* by 4;	*a* by 7;	*a* by 10.

In what precedes we have shown how, through objective illustrations, the products of the numbers 2, 3, etc., to 10, may be understood by children, and how these products may be fixed in their minds by oral and written exercises. These products form the so-called multiplication table, by the help of which many arithmetical operations, which might be performed by the repeated addition of the same number, may be materially shortened. While constructing this table the pupil has found that the multiplication of a number is finding the sum obtained by additions of the same number. He has himself found the product by the addition of the same number; and he can in the same way find it again, should it escape his memory. But facility in computation requires that these products be made things of the memory. Remembering how to find a product is to be distinguished from remembering the product itself. In a subject like arithmetic, where the understanding is constantly called into exercise, there must be no halting of the memory. Hence we seek to make the facts of the multiplication table so appropriated by the mind that they will seem to be the necessary qualities of the memory itself. This is to be accomplished through continuous practice in computation, provision for which has been made in what precedes.

It is well so to treat the subject of multiplication as to prepare the pupils for division. We have been finding products when we knew the factors; but the process is to be reversed, and we are to find the factors when the product is given; or, we are to find one factor when the product and the other factor is given. To divide 24 objects, beans, sticks, etc., into 4 equal parts, put first one object in each of 4 different places, then distribute 4 more in the same way, then 4 more, and so on till the 24 are all distributed. We now have 6 objects in each place. One of the four parts, which together contain 24 objects, contains 6 objects. It follows that 24 is 4 times 6, and also that the fourth part, or $\frac{1}{4}$, of 24 is 6.

This finding of the second factor is accomplished through successive subtractions of the same number; but facility in reckoning requires the pupil to be able, given the product and one factor, to know the other instantly. He must be taught to perform a process the opposite to what is required in finding the product from the factors. He must be able to tell at once how large a certain part of a number is, how often a certain number can be taken from another, or how often a certain number is contained in another.

Much may be done in connection with multiplication to prepare the student for such work. The following figure



illustrates these truths:—

4 times 6=24;
¼ of 24= 6;
4 in 24= 6 times;

6 times 4=24;
⅙ of 24= 4;
6 in 24= 4 times.

Therefore, to the usual questions, How many are 4 times 6? etc., add: From what number can 4 sixes be taken? 6 fours? From what number can 4 be taken 6 times? Six 4 times? In what number is 4 contained 6 times? Six 4 times? What is the fourth part of 24? The sixth? Of what number is 6 the fourth part? Four the sixth part?

If 4 apples cost 24 cents, how much will 1 cost? If 6 cost 24 cents, what costs 1? Charles stands 24 soldiers in 4 rows; how many stand in 1 row? What part of 24 is one row? 24 is how many times 6? How many times 4? etc.

If such questions as these are asked in connection with the development and application of the multiplication table, a good preparation will be made for the next stage of the work, namely, division.

THE STUDY OF SYNONYMS.

Alleviate and Relieve.

1. Both are derived from the Latin.
2. Both mean to allay.
3. ALLEVIATE signifies to lighten by making less.
   RELIEVE signifies to take away or remove.
   As a general rule ALLEVIATE refers to our internal feelings only; while RELIEVE refers to our external circumstances.
4. Condolence and sympathy tend greatly to ALLEVIATE the sufferings of our fellow-creatures. It is an essential part of the Christian's duty to RELIEVE the wants of his indigent neighbor.

Anecdote and Story.

1. ANECDOTE is derived from the Greek.
   STORY is derived from the Latin.
2. Both refer to narration.

3. An ANECDOTE has but little incident and no plot.
   A STORY may have many incidents and a thrilling plot.
4. A good writer picks up a number of ANECDOTES and weaves them into his STORY.

BESTOW AND CONFER.

1. BESTOW is derived from the German.
   CONFER is derived from the Latin.
2. Both refer to giving.
3. CONFERRING is an act of authority; princes and men in power CONFER.
   BESTOWING is an act of charity or generosity; people in private stations BESTOW.
   Honors, dignities, privileges, and rank are the things CONFERRED; merit, favor, interest, caprice, or intrigue gives rise to CONFERRING.
   Favors, kindnesses, and pecuniary relief are the things BESTOWED; necessity, solicitation, and private affection lead to BESTOWING.
4. "Though I BESTOW all my goods to feed the poor."
   "The public marks of honor and reward CONFERRED upon me."

POLITENESS AND COURTESY.

1. POLITENESS is derived from the Latin.
   COURTESY is derived from the French.
2. Both refer to good breeding.
3. POLITENESS denotes that natural ease of manner which springs from a desire to please.
   COURTESY displays itself in the address and manners acquired in courts or in society.
4. "POLITENESS was a part of his nature, for his heart went out in love to all humanity."
   "My lord, for your COURTESY I thank you."

EDITORIAL.

A TOUCH of nature makes the whole world kin," and a touch from the teacher will often make her boys realize that she is akin to them. Not a look or a word, but a *touch*, literally. What teacher of any experience at all has not seen the big boy weaken and break down when she put her hand on his shoulder? Only a little while ago a boy doggedly stood out and determinedly persisted in an untruth. He was not a bad boy generally, but had gotten himself involved, and now held to his story though he knew his teacher could not believe him. She had said what she could, and then left him alone to think. Half an hour later she came back to him. He stiffened up and put on a sullen look, but instead of talking, she put her arm around him, and the big fellow broke down and sobbed like a baby. Talking seemed to have no effect; but when she touched him, and at the same time spoke gently and seriously to him, he could hold out no longer. The same rule has been known to work in case after case.

Ignore the fact that your boys are dirty and disagreeable. Remember that to some of them the teacher, in her neat dress, dainty collar and apron, and cheery face is a revelation. Their mothers too often are rough and neglect the lesser virtues; and the fact that "Miss —— is n't proud; she 'd put her arm round a fellow in a minute if he felt bad," widens her influence incalculably.

DID you ever keep a bulletin board of daily news in your school-room? If you have one of the higher grammar grades, try it, and see how well it works. Take the board behind your desk or in some other conspicuous place. Buy a paper every morning and turn it over to a couple of your brightest boys or girls. They catch the idea very quickly, and learn to leave out the items which are unimportant or worse. The first day your boy, if left to himself, may put on the latest polo or base-ball record, or your girl may find the list of casualties and regale you with accidents and murders; but they will not fall into these errors more than once, and a little care will prevent the once.

You will be surprised to see the eagerness with which your pupils read this bulletin and, at recess, discuss it. Take this item, for example, which appeared in The Boston Herald recently, and was copied on a school bulletin board: "Western railroad capitalists propose to build a road from Minnesota to Russia and China by way of Behring Strait." At recess one could hear a great stir among the scholars: "Do you believe it 's true?" "I don't see how it is possible!" "Why not? It 's no more wonderful than that great air-ship Dr. Debausett wants to build." "Well, it would be a big thing for commerce, would n't it?" "Let 's ask Miss —— if she supposes it is a fact." And so on, *ad infinitum.* Is it a small thing to get our boys and girls so interested in the daily news?

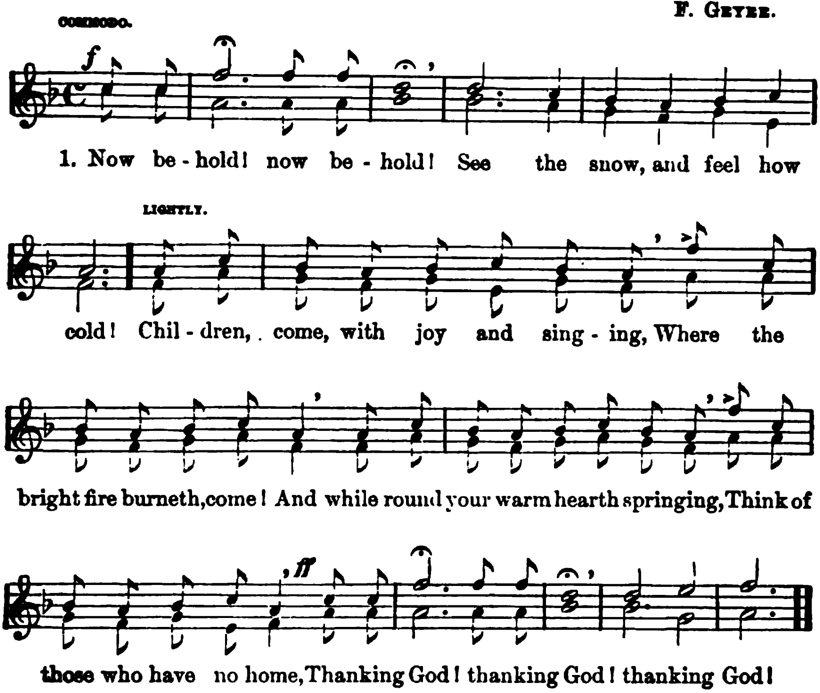
A VIGOROUS article from the pen of the Rev. Dr. C. H. Parkhurst, of New York, on "What the Public Schools Should Teach," in the March Forum, contains many pithy, epigrammatic sayings, some of which we give: —

> "People have to pay for being stupid." "Industrial ignorance is the mother of idleness, the grandmother of destitution, and the great-grandmother of socialism and nihilistic discontent." "In order to the common weal there are, in general, four things that an adult, man or woman, ought to know; four things, therefore, that the state ought to see that its children have a fair opportunity to learn, namely: to think, to work, to behave, and to love their country." "Furthermore, honesty and its associate virtues are no more hereditary than arithmetic and spelling, but have to be acquired by something the same tuitional process, which must begin with the boy's beginning and grow with his growth, if it is to be in him an integral element." "Public schools ought to teach children to love their country. This obligation is particularly urgent at such a time as this, when there are so many coming among us whose prime interest in this country is a good deal like the interest with which a burglar regards the bank he is trying to crack, or that a lawyer feels in the estate he is attempting to settle. One of the most solemn questions an American can put to himself is whether we have sufficient national vitality to assimilate, to Americanize, all the adventitious material that is now being thrown into the national mass. If ever a nation was in danger of dying of dyspepsia, ours is."

MIDWINTER.

(May be transposed to Key of E-flat.)

F. Geyer.


Comodo.
f
1. Now be-hold! now be-hold! See the snow, and feel how
Lightly.
cold! Chil-dren, come, with joy and sing-ing, Where the
bright fire burneth, come! And while round your warm hearth springing, Think of
ff
those who have no home, Thanking God! thanking God! thanking God!

2 Grateful be! grateful be for your mercies rich and free!
Oh, how many, poor and weary,
Sad and hungry, sick and cold,
Wander through this world so dreary,
Suff'ring more than can be told!
Grateful be! grateful be! grateful be!

3 Time improve! time improve! learn in youth to look above!
God will bless your pray'rful waiting,
And your pious deeds requite;
Doing good, and evil hating,
Are well pleasing in his sight.
Time improve! time improve! time improve!

HAPPY HOURS.

ARRANGED BY MRS. CAROLINE S. MORGAN.

TWELVE LITTLE BROTHERS.

(RECITATION.)

THE New Year gave a dinner to twelve little brothers,
No one of whom had the same tastes as the others:
The Moons, they are called, from the very large size
And wonderful roundness of all of their eyes.
'T was a mild winter evening, exactly at five,
When the twelve little brothers began to arrive.
March came in a comforter big as a shawl;
And August without any stockings at all;
And Feb. in an ulster, although he was small;
And April in boots, which he left in the hall;
December in arctics — he feared he would fall,
And therefore was constantly giving a haul
To the straps; and November, if right I recall,
Had brought an umbrella in case of a squall;
And May had a beautiful blue parasol;
And then came July, with the rosy-cheeked Jan.,
Though Jan. was in furs, and July had a fan;
And Septy and Octy in round caps and frills;
And June in a pinafore old as the hills.

There was plum-pie, and peacock, and turtles, and thyme,
And more than I ever can tell in my rhyme.
May remarked: " If you please, I 'll take lamb and green peas,"
While September exclaimed, " Apple dumplings and cheese ";
And July was inquiring for lemons to squeeze;
And August for ices his palate to freeze;
And June a great spoon did impatiently seize
And drummed on the table for " Fresh strawberr*ees!* "
November said, " Turkey — I can't wait a minute! "
December said, " Pudding, with cinnamon in it! "
January clamored for oysters — March hinted " Half-shell ";
Feb. thought chicken salad would do very well;
Said Octy " Dessert without nuts can't excel ";
And April was anxious his wishes to tell —

(They were chiefly boiled eggs) — till, the tumult to quell,
The New Year made use of his silver hand-bell,
And was forced to confess, not at all at his ease,
That there *never* were twelve little brothers like these.
And he rose and declared he would stand it no more,
And the twelve little brothers he savagely bore,
By their twelve little collars, outside of his door;
And the last thing I heard of was June's pinafore,
Which caught on the door-knob and dolefully tore.

So, if these little brothers, in good Eighty-four,
Get treated to weather they 'll sadly deplore;
And it rains every day in the sweet month of May,
And freezes in August. my readers can say
That the twelve little brothers, so fractious and queer,
Have excited the wrath of the lordly New Year.

— *N. G. Cone.*

SPRING'S CHILDREN.

Oh, March is a rollicksome boy,
  Of bluster and din he ne'er tires;
He shouts in his infinite joy —
  To all sorts of fun he aspires;
He rattles the windows and doors,
  He whistles o'er forest and lea;
The chimney and roof he explores,
  For a mischievous fellow is he!

Now. April 's a shy, lovely girl,
  Who timidly wanders along,
And golden with sun is each curl,
  And wakes in her heart a sweet song.
Though oft she grows pensive and sad,
  And tears on her cheeks we may see,
Ah, look! in a twinkle she 's glad!
  Oh, a bonny. wee lassie is she!

But May is a beautiful maid,
  Who sings with the birds and the rills;
She roams over meadow and glade,
  Her smile lights the valleys and hills.
With glances so winning and true.
  With step that is gladsome and free,
And eyes of the bonniest blue —
  Oh, the Spring's peerless daughter is she!

— *George Cooper.*

EXAMINATION QUESTIONS.

Given at the Salem (Mass.) Classical and High School.

CIVIL GOVERNMENT.

I. TOWN.

1. State principal executive officers of a town.
2. Describe what is in a warrant for an annual town meeting.
3. What is done with the warrant?
4. Duties of a town clerk.

II. CITY.

1. The number of wards in Salem.
2. The number of aldermen.
3. The number of common councilmen.
4. Date of city election.
5. Number of members of school committee and the presiding officer.

III. STATE.

1. Number of members in state legislative department, each branch.
2. What is the executive department of the State?
3. State all about the apportionment of senators and representatives.
4. The powers of the governor.
5. Four things necessary in drawing money from the state treasury.

IV. STATE — JUDICIAL.

1. State the different judicial courts and of what they are composed.
2. Duties of a probate court.
3. Qualifications of an attorney-at-law.
4. Define plaintiff, initial jurisdiction, administrator, execution.
5. Recognizance, costs, warrant, bail.

V. FEDERAL — LEGISLATIVE.

1. In what ways may a bill become a law (in full)?
2. How is the publicity of the proceedings of congress secured?
3. State the different presiding officers of the senate.
4. Qualifications for senator and for representative.

VI.

1. State salaries of all members of congress.
2. Define tax, duty, impost, excise.
3. State all about naturalization.
4. State all about patents.

VII. EXECUTIVE — FEDERAL.

1. Into what divisions may the work of electing a President and Vice-President of the United States be conveniently divided?

2. Who determines the manner of appointing electors, and what is the number of electors?

3. Describe the work of the electors.
4. How are certificates of the presidential electors sent to Washington?
5. When are the electoral votes counted?

VIII.

1. Describe the counting of the electoral votes.
2. What action is taken by the House of Representatives if no person receives the requisite majority?
3. If the House of Representatives fails to elect a President, who succeeds to the presidency?
4. If the electors fail to elect a Vice-President, how is he chosen?
5. State the order of succession to the presidency.

IX. BEGINNINGS OF GOVERNMENT.

1. Between the adoption of the Declaration of Independence and the Articles of Confederation, how was the government of the colonies exercised?
2. Name four defects of the Articles of Confederation which led to the adoption of the Constitution.
3. Give the preamble.
4. Give dates of the adoption of the Declaration of Independence, the Constitution, the Articles of Confederation, and of the inauguration of Washington.

X. EDUCATION AND TAXES.

1. Why are children educated?
2. Which is needed for good citizenship, education or intelligence, and what is the difference?
3. State all the uses of taxes and by whom all taxes are finally paid.
4. Explain direct and indirect taxes and which Massachusetts and the United States use.

◆

BOOK NOTICES.

NILES' ADVANCED GEOGRAPHY. D. D. Merrill, publisher. St. Paul, Minn. This book is one of the most sumptuous of the sumptuous geographies that have lately been placed before the American people. In estimating the merits of the author's treatment of the subject it should be borne in mind that this is a book for advanced classes. He treats first of mathematical, secondly of physical, and thirdly of political, geography. He abominates the old-fashioned "question and answer method." He believes in studying the lessons for the *ideas*, without a thought of memorizing the words. He has a very high estimation of the value of the imagination in the study of geography. When the pupil comes to the recitation, the author thinks that he should use his own language and, to a great extent, his own thoughts. For instance, if the lesson is upon the map of New England, he should discover for himself that Maine is the largest state of the group, that its coast is irregular, that its surface is dotted with lakes, etc. He thinks that pupils should be required to use the pencil and crayon at every step. The work is well written, in such language as to be easily apprehended. The maps are of the very best quality, and the appropriate and abundant illustrations are so elegant that any description would be wholly inadequate.

BUTLER'S COMPLETE GEOGRAPHY. By Jacques W. Redway. Philadelphia: E. H. Butler & Co., publishers.

No other study in the curriculum of our schools and academies has received such an impetus during the past twenty years as that of geography. The wonderful development of railway and steamship systems, resulting from the immense growth of commercial enterprises and the desire for travel, which is a characteristic of the American people, have combined to make geography one of the most essential studies. This book is the advanced, or higher, volume of a two-book series. It is designed to present logical science, with which every intelligent person should be familiar.

The arrangement is such as to combine a class text-book and a volume of useful information. The essential principles are arranged topically, and are printed in large, full-faced type. These principles are supplemented by copious and carefully selected explanatory matter, added in shape of foot-notes. The latter contain a fund of information, valuable not only for reference, but also for supplementary exercises. There is no greater difference between a modern train of vestibule palace cars and a stage-coach of fifty years ago, than between this superb text-book and the old-fashioned Smith's Geography and Atlas, which the present writer studied less than fifty years ago. A glance at the sumptuous pages of this book, with its maps of extreme elegance, its type that would almost make Baskerville rise from the grave, its engravings of the most exquisite workmanship, illustrating in a marvelous manner the finest architecture, scenery, inhabitants, their habits, manners and customs, with the latest inventions and discoveries, will certainly make one wish that he was a school-boy again and could have a Christmas present of this book.

NEW GRAMMAR SCHOOL HISTORY OF THE UNITED STATES. By John J. Anderson, PH.D. New York: Clark & Maynard. 1887.

Dr. Anderson has achieved great success as a writer of school histories. The school children of our country are greatly indebted to him for lifting the study of history out of the uninteresting collection of meaningless facts into the study of an interesting, spirited narrative, conveying useful information in an attractive form. This, his latest book, shows on its pages the careful, accurate work of a lifetime. In the selection of the material, in the interesting and graphic style of writing, in the frequent and well-executed maps and cuts, in the topics for review, chronological summary, and foot-notes, together with the excellent mechanical execution, this work forms one of the best and most attractive text-books to be found in any school-room.

NUMBER STORIES. By L. J. Woodward. Boston: Ginn & Co. Pp. 166.

These lessons are intended to supplement the careful and systematic teaching of numbers from seven to one hundred. The reading is made simple by the use of familiar words, frequent repetitions, and short sentences; thus the pupil's attention can be wholly given to the combinations, and the fact that the lessons are put in story form will interest the children. Sometimes the number is left out so that the pupil may supply it in reading. For instance: "She gave two roses to the baby's nurse. Each had five petals. The petals began to fall. Soon there were only seven petals left on two roses. The other— lay on baby's white dress." The author has tested these lessons in classes of children from seven to eleven years of age.

MONOGRAPHS ON EDUCATION. Boston: D. C. Heath & Co.

ENGLISH IN THE PREPARATORY SCHOOLS. By Ernest W. Huffcut, Instructor in Rhetoric in Cornell University.

The aim of this Monograph is to present as simply and practically as possible some of the advanced methods of teaching English grammar and English composition in the secondary schools.

ENGLISH IN THE SCHOOLS. By F. C. Woodward, A.M., Professor of English, Wofford College, S. C.

This book contains many valuable hints for the teacher upon a subject of importance.

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COMMON SCHOOL EDUCATION.

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VOL. II. APRIL, 1888. No. 4.

PRACTICAL METHODS OF TEACHING SPELLING.[1]

BY ANNA B. BADLAM,

Rice Training School, Boston, Mass.

I.

INTRODUCTION.

THE influence of the progressive spirit of the age manifests itself in no department for the diffusion of knowledge more strongly than in our public schools. It is an influence which is confined to no one locality, but, comparatively speaking, is as often the mainspring of action in the schools of a small village as in those of a large city.

If we compare the schools of the present with those of the past, we cannot fail to see that the universal interest in common school education, an interest which has called vast numbers of teachers together to study and compare the various methods of teaching, has been productive of the greatest good to our schools, and that the benefit derived from the time thus spent in the consideration of the fundamental principles of teaching any subject will be a lasting one.

It is by devoting time and attention to the *details* of teaching a subject that one is able to separate the chaff from the wheat. Hence we find that the result of much of the research of what is commonly known as "modern methods" has been to open the

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[1] Copyright, 1888, by Anna B. Badlam.

eyes of the public to the fact that discrimination is necessary in this as well as in other fields of action, and to convince men that however brilliant the *results* of a method may appear, the *method* itself, unless founded upon *well-grounded principles*, must necessarily be of spasmodic growth, and have but a brief existence.

Hence, a method that fails to show the connecting links along the entire course, from the lowest to the highest grade of our schools, can find little chance of securing a permanent place in the course of instruction of the present age, which aims to do the most good in the best way.

In connection with the general interest which has been shown in the study of methods, no one subject perhaps has received more attention than reading.

The interest in the subject has been a most absorbing one, and the various ways of teaching it have been the topics of deep and animated discussion on the part of those directly and indirectly connected with the work in its elementary as well as in its advanced stages.

It is not the purpose of these pages to enter into the discussion of the various methods of teaching reading.

The special methods selected for consideration will be merely those that run *parallel* with the methods employed in the first principles of teaching spelling.

Many methods have been employed to teach reading with more or less success. Among them the A B C method is the only one wellnigh obsolete, the ground for its disuse being the conviction that the art of spelling is not a desirable nor a necessary feature of the art of reading, and that the remaining methods of teaching reading will, if intelligently employed, give excellent results, particularly when the best portions of each are combined and woven skillfully into the general structure of the teaching.

In discarding the A B C method many of our most prominent educators seem to have lost sight of the fact that while the method is an undesirable feature in teaching reading, yet it must needs hold an important place in teaching spelling; for since the power to *spell correctly* is as much a test of a thorough common school education as the power to *read intelligently*, to *calculate accurately*, or to *write legibly*, it would seem as if the study of the ways and means of teaching spelling might be a profitable one and include a consideration of this old-time but by no means useless method.

In making a study of these methods of teaching spelling one must look as carefully at the rules that govern it as one would look at the rules of arithmetic, in order to digest them mentally before prescribing the mild mental diet for the child.

Were one to attempt to teach each word in the child's vocabulary as an isolated thing, the work would be almost without limit as the vocabulary increased.

Hence, in order to economize time and space, the child must be trained to group and to classify, to understand the use and the effect of the simple prefixes and suffixes, and to note the simple laws of spelling with the occasional exceptions to these laws.

All this may be done easily, rationally, without burdening his mind with arbitrary rules, if he is trained to use his powers of observation from the outset.

In the teaching of arithmetic one does not attempt to teach beyond the number ten until the child thoroughly understands the relation which numbers below ten bear to the number ten; hence in teaching spelling one must look well to the foundation before one attempts to erect the structure.

The basis of all intelligent work in spelling should be *phonic analysis*, and all early instruction should be planned to develop *ear*, *voice*, and *eye*, in order that the child shall *hear*, *speak*, and *see* accurately.

The child who enunciates well is the exception rather than the rule, in the lowest classes of our primary schools.

Much of the child's trouble in pronouncing his words correctly is due to the force of habits formed before he could use the organs of speech easily; much is due to his inability to use these organs of speech intelligently, although they are more flexible than when he first attempted to make use of them; but his greatest trouble lies in the fact that he has not yet learned to *hear correctly*.

Let him *hear* correctly and the even chances are that he will *speak* correctly; and *ear* and *voice* once trained, the training of the *eye* is a matter more simple than one might suppose.

THE TRAINING OF THE EAR.

1. Let the teacher designate any object in the room by *sounding* the name of the object as she uses it in a sentence. Let the children volunteer to find the object thus designated.

Example 1.

I can see a m-ă-n.
There is a b-ŏŏ-k.
I sit at my d-ĕ-s-k.
The c-l-ŏ-ck is on the wall.

2. Let the teacher weave a story and *insert* at different stages the words she wishes the children to recognize by *sound.*

Let her make a slight pause after a word, as she sounds it, to enable the children to volunteer to tell the word.

Example 2.

I have a pet c-ă-t. She likes to lie on the m-ă-t. I like to p-ă-t — my cat. She likes to have me p-ă-t — her.

One day she caught a r-ă-t. This r-ă-t — was very f-ă-t. My c-ă-t — lost the r-ă-t. It r-ă-n — off. Then I gave my c-ă-t some milk in a p-ă-n. I poured the milk out of a c-ă-n — into the p-ă-n.

The object of a series of lessons like the first example is simply to accustom the child to recognize words when resolved into their *phonic elements.* The object of a series of lessons like the second example is twofold, for it aims to test the child's power to recognize words when resolved into their elementary sounds and to confine his attention to a specal *short* vowel-sound as it occurs, first, in words where the *initial* consonant *changes* but the final consonant remains *unchanged ;* second, in words where a *contrast* is shown in the *final* consonants, as ra*t*, ra*n*.

3. Let the teacher repeat the special words that she introduced into her story.

Example 3.

Cat, mat, pat, rat, fat, ran, can, pan.

Let her then sound each word thus: —

C-ă-t. Hear the first sound — c. Hear the second sound — ă. Hear the last sound — t. C-ă-t — cat.

M-ă-t. Hear the first sound — m. Hear the second sound — ă. Hear the last sound — t. M-ă-t — mat.

P-ă-t. Hear the first sound — p. Hear the second sound — ă. Hear the last sound — t. P-ă-t — pat.

R-ă-t. Hear the first sound — r. Hear the second sound — ă. Hear the last sound — t. R-ă-t — rat.

F-ă-t. Hear the first sound — f. Hear the second sound — ă. Hear the last sound — t. F-ă-t — fat.

R-ă-n. Hear the first sound — r. Hear the second sound — ă. Hear the last sound—n. R-ă-n — ran.

P-ă-n. Hear the first sound—p. Hear the second sound — ă. Hear the last sound — n. P-ă-n — pan.

C-ă-n. Hear the first sound — c. Hear the second sound — ă. Hear the last sound — n. C-ă-n — can.

From a series of lessons similar to those under the third example the child is led to discover that words differ as to their elements.

He notices that the words *fat*, *cat*, *mat*, *rat*, *pat*, all *end* with a *similar* sound, and that the *same middle* sound is found throughout the set; that the words *can*, *ran*, *pan* all *end* with a *similar* sound, though it *differs* from the final sound heard in the other set; that the *middle* sound in this set of words is the same throughout, and corresponds with the middle sound heard in the former set; that no two words in the same set *begin* with a *similar* sound, though when he compares the two sets he finds that *cat* and *can* begin with a *similar* sound; and that the same is true of *rat* and *ran*, *pat* and *pan*, while *mat* begins with a sound unlike any found in the other words.

The teacher should in lessons similar to those under the second and third examples lead the child to notice successively the short vowel-sounds, ĕ, ĭ, ŏ, ŭ, until his ear readily detects the difference. When his *ear* has become trained to distinguish sounds readily and accurately, those bearing directly upon the training of the *voice* should follow.

METHODS IN GEOGRAPHY.[1]

BY LARKIN DUNTON, LL.D., AND MISS L. T. MOSES.

VIII.

NATURE LESSONS.

First Year's Work.

THE things to be observed in the remaining lessons on nature, with such suggestions as would seem to be of value to the teacher, will now be given in the order in which it will be well to take up the various subjects.

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[1] Copyright, 1887, by Larkin Dunton and L. T. Moses.

The things to be observed in the lessons on dew are the time when it falls, the places where it is found, and what becomes of it. The things to be thought of in the lessons are what the dew is like as it sparkles and glistens on the grass, and its use to the grass and flowers and the people, and the things the children wish to observe for the next day.

In regard to the treatment of the use of objects observed, it will be well to say a few words here, as the writer considers it an important part of all these lessons on nature. A few years ago, a writer on ethics took the position that the love of being useful to others would keep any one who had this love from every immoral action; in fact, that the only ethical teaching necessary was in the direction of inspiring in children the love of being of use, and in showing them how to carry this love of use into their outward actions. A little thought will show any one that there is much truth and much philosophy in teaching children to be and to love to be of service to others.

Hence in all these lessons the thought of the child should be turned to the use of the form or aspect of nature that he is studying. The effect of this consideration of the use of everything in nature should be to cause the children to desire to be useful themselves to the extent of their ability. The teacher has only to show the pupils in what way they can be of most use to her and their schoolmates, in order to turn their laudable desires into efforts for self-restraint and service to all in the room, and into active efforts to do the hundred and one little things, the very doing of which will itself help them to a habit of doing and loving all suitable service.

These things are to be observed about the wind: its direction in regard to the sides of the room — whether it blows in at the front, the side, or the back window, or whether it blows in neither of these directions. The classing of winds by the points of the compass may be left till the children have learned these points in connection with the place lessons the second year. In respect to the velocity of the wind, it is sufficient this year to know when there is very little wind, when there is a breeze, and when the wind is high. The sound that the wind makes should be observed, and its likeness to other sounds familiar to the children should be considered and named. The uses of the wind will not be apparent to children of this age, but a little attention on the part of the teacher to the grateful freshness of the air when there is a good breeze, and to the feeling of exhaustion which a still, hot day brings, will help the little ones to see the use of constant movement of the air in keeping all persons well and strong. It is to be hoped that the school-room air will never be in a condition to illustrate this use of the wind.

The lessons on the heavens this year should begin with general lessons in which the form, extent, and color should be observed. In the course of these lessons, the children should learn to distinguish the colors that clouds may have from the colors of the sky itself. The various bodies to be seen in the heavens should also be known, with the time when they are to be seen, which ones by day and which by night. The pupils will be likely to name the clouds, and it will be well to set them to watching, in order to find whether the clouds are as far off as the sun, the moon, and the stars. Suppose it takes a long time for the children to find this out, and requires much thinking on their part, it will be good work for them, and the pleasure of finding that the clouds pass before these bodies, and of thinking that they must hence be lower, will give new zest to the many observations they must make in these lessons.

The observations of the sun should begin some day when there is enough smoke, fog, or haze in the air to render the observations safe for the children's eyes. The form and apparent size can be easily seen, and shown with the hands. The motion can be watched and the pupils can tell of its rising and setting from their previous observations probably. The children may now be allowed to tell of the light and heat which the sun gives us, and how the flowers grow, the birds sing, and all nature is happy in the sunshine. So bright does the sunshine make every one feel that people speak of other things that make them happy as sunshine or sunny things. The mother thinks of her child as sunshine; the teacher likes children who have sunny faces, as does everybody else in this wide world; and every child who tries can be like a bright sunbeam. The lesson may close with the children's telling that they are going to look at the sun and try to find out just the moment it rises and just the moment it sets, and that they will try to be like the sunshine. A word of caution should be given to the children in regard to the danger to the eyes of looking at the sun when it is in full light.

The lessons on the moon can best be given during the short days of winter, when it can be seen quite early in the evening, or better, with the teacher at the close of school. The observations of the moon should begin as soon as the new moon can be seen, and should continue till after the full, so that the beginning, at least, of the waning can be observed. The place, changing from night to night; the form, also changing; the movement while watching, and its contrast to the movement from night to night; the beautiful silvery brightness, — all should be carefully observed and described the next day.

The children will be interested to tell what the moon seems to them to be like, when they first watch its narrow crescent, and through its various phases. They will like to connect their observations and fancies with their little songs and poems about the moon. They will find the "two little horns" that are mentioned in the kindergarten song, and they will like better than ever to "sit in the middle and hold by both ends;" they will see the "silver boat" and "launch it off that bright-edged cloud," and float merrily along; and they will always better understand the beautiful thoughts of others about the moon because they too have thought beautiful thoughts about it. A little care on the part of the teacher will lead the children to watch the moon the following months, and see new beauties as she bears her way over the star-spangled or cloud-strewn heavens.

The observations of the stars for this first year are quite general. If the preceding work has been well done, the children have begun to form habits of observation. The three or four last watchings of the moon must have been done by the children alone, as the moon would rise too late to be observed with the teacher, and after the full. It will not be well, however, to trust such little ones too far, as exactness in seeing and describing is the very pith of this whole work. So in their observation of the stars it is best to give them only one new thing to see each night.

The first night the children should try to find out how many stars there are. The attempt to count the stars will convince the children that there are a great many; and the next day, with the help of the teacher, they will express the fact that there are so many stars that they cannot be counted.

The next night the children will look to see if there are as many stars as there were the first night, and will count all the very bright ones. They will also try to find the very brightest star of all, and see just where it is, so that they can point to where they saw it for the teacher the next day. This brightest star of all will probably be a planet, and it will be well for the children to watch it for as many weeks as it is visible before their bedtime. The teacher gives the name of this bright star that the children will like to call their star, and will point out its subsequent reappearance, and at last the children will come to know the star whenever they see it.

The third night the children look for all the very bright stars they found the night before and as many more as the teacher directs them to look for. They will also look to see if their star differs in any ways from the other bright stars except in being brighter. They ought to be able to see the color of their star, and observe that it shines steadily, while the other stars twinkle. It will be well, too, to have the children find the point of the heavens right overhead, and find the distance from this point to the place where the moon and sun rise. They should be able to tell that their star is halfway, a little more than halfway, a little less than halfway, or about a quarter way, up to the zenith. Of course their estimates will be rude at first, but the teacher can help them by having them point with her till the halfway point, at least, is pretty accurately fixed.

Another night the pupils may continue the observations of distance, and may think, while they are looking, what the stars are like. Children are very fertile in finding things that the stars resemble, and some of their thoughts are very beautiful.

SCHOOL-ROOM WORK—HOW—WHY.[1]

BY N. A. CALKINS.

IV.

OBJECT-TEACHING.—FORM.

HABITS of comparing objects carefully, of observing resemblances, and of distinguishing differences are indispensable aids in mental training and in the acquisition of knowledge. Lessons on *form* provide teachers and pupils with well-adapted means for securing such valuable habits; and if the methods used for teaching the pupils to know the characteristic features of the several *forms* employ these two processes properly, the results will be satisfactory, both in the mental training and in the knowledge attained. Failure in securing these ends is evidence of faulty teaching.

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[1] Copyright, 1887, by N. A. Calkins.

FIFTEENTH LESSON. — RHOMB, RHOMBOID.

Place before the class the following forms, *a square*, *an oblong*, *a rhomb*, *a rhomboid*, large enough to be distinctly seen by all in the class, and give to the pupils pieces of paper of each of these shapes. Lead them to compare the square with the other short forms; to observe that each has *equal sides;* that the two *differ in their angles;* that one has right angles only; that the other has two obtuse and two acute angles. Teach the term *rhomb* as the name of this form.

Let the pupils now compare the rhomb with the longer form that resembles it, and observe that the two are *alike in their angles;* that they *differ in their sides.* Teach the term *rhomboid* as the name of this form. Write both of these names on the blackboard, and require the pupils to spell them.

The pupils may now compare the oblong and the rhomboid, observing wherein they are alike, and in what they differ. Request the pupils to state how each two forms — *square and rhomb*, *oblong and rhomboid*, *square and oblong*, *rhomb and rhomboid* — resemble each other and how they differ.

Folding Forms. — Direct the pupil to take a *square* piece of paper and find *one third of the length of a side;* then to measure and mark that length toward the left from the upper right-hand corner, and also to mark it toward the right from the lower left-hand corner; then to fold the right-hand side of the square from the upper mark to the lower right-hand corner; and to fold the left-hand side of the square from the lower mark to the upper left-hand corner.

Request the pupils to compare this square, changed by folding triangles on its sides, with the rhomboid. Let the pupils now take oblong pieces of paper and fold the ends so as to form rhomboids.

Drawing Forms. — The pupils may now draw the *rhomb*, *rhomboid*, *square*, and *oblong*, arranging them in pairs with *like sides;* with *like angles;* with *unlike sides;* with *unlike angles.*

SIXTEENTH LESSON.—DIAMETER. DIAGONAL.

Form by Paper-folding.—Give to each pupil two square pieces of paper. Direct them to place the *opposite sides* of one square together evenly, and *to crease* the fold; then to open the fold and place the *other opposite sides* together, and to crease the fold. Now lead the pupils to observe that the creased folds extend from a side of the square to an opposite side of it, crossing each other in the center of the square. Lead them to recall the lines that pass from side to side through the center of a circle, and direct them to give the same name to these lines in the square. Let the pupils state how many *diameters* these lines in the square represent.

Diagonal.—Direct the pupils to take the other square piece of paper and place two *opposite corners together* evenly, and *to crease* the fold; then to open the fold and place two *other opposite corners* together, and to crease the fold. Let the pupils compare the creased lines in the two squares and observe that in one square the lines connect opposite sides; that in the other the lines connect opposite corners. Teach the term *diagonal* as the name for the line that extends from a corner of a square, through its center, to an opposite corner.

Drawing.—Let each pupil draw two squares; then draw two *diameters* in one of them, and two *diagonals* in the other. Let them also draw a rhomb, and then draw two diagonals in it; then observe that the diagonals of the rhomb are not of equal length as in the square; thus teach the fact that the *diagonals of a square are equal*, and that the *diagonals of a rhomb are not equal.*

SEVENTEENTH LESSON.—PRISMS.

Place before the class a *square prism* and a *triangular prism*, also *strips of paper* as wide as the prisms are long, with some of the strips long enough to wrap three times around the triangular prism. Lead the pupils to compare the two prisms as to the *shape of the side-faces* and as to the *number of their side-faces*, and to state the *shape* and the *number* of the faces on each prism. Let them compare their *end-faces*, as to shape, etc., and notice that the *shape of the end-faces* gives the name to the prism; as, the *square faces* of the square prism, and the *triangular faces* of the triangular prism, furnish the distinguishing name for each.

Representing Prisms by Paper-folding. — The strips of paper may now be wrapped around each prism, and *creased* at the several edges of the prism. Remove the solid prisms from the papers, and hollow prisms will remain. If the folds of the paper have been properly *creased* at the edges of the prism, each of the strips may be made to represent prisms with *three side-faces*, or *four side-faces*, or *five side-faces*, or *six side-faces*, etc. The pupils may be allowed to call these prisms respectively, *three-sided prism*, *four-sided prism*, *five-sided prism*, *six-sided prism*, etc., until the terms for the *five-angled* and the *six-angled* ends have been taught as *pentagon* and *hexagon*. Let the pupils take these creased strips of paper and form prisms with different number of side-faces, as the teacher may direct, thus: make a prism with *three side-faces ;* make a prism with *four side-faces ;* one with *five side-faces ;* one with *six side-faces*, etc.

Pentagon. — Lead the pupils to notice that *the shape* and *the size* of the side-faces remain the same in each prism thus formed; that the change is made in the *number* of the faces. Lead them to observe also the *shape of the ends* of the *five-sided prism ;* that they have *five equal sides* and *five obtuse angles.* Teach the term *pentagon* as the name of the plane form with five equal sides and five obtuse angles.

Hexagon. — Let the pupils observe the ends of the six-sided prism; that it has *six equal sides* and *six obtuse angles.* Teach the term *hexagon* as the name of the plane form with six equal sides and six obtuse angles.

Heptagon. — In a similar manner, by means of the seven-sided prism, teach the term *heptagon* as the name of the plane form with seven equal sides and seven obtuse angles.

Octagon. — By means of the eight-sided prism the term *octagon* may be taught as the name of the plane form with eight equal sides and eight obtuse angles.

EIGHTEENTH LESSON. — POLYGONS.

Represented by Paper-folding. — If the pupils have been taught, as directed in the fourteenth lesson, to fold strips of paper into *three equal lengths*, they will be prepared for folding a *hexagon*, as follows: give the pupils pieces of paper cut in the shape of a *circle.* Direct them to *fold the circle in halves ;* then to fold the double half into *three equal parts;* then to make the *curved side* straight by folding a narrow strip so as to leave the whole in the form of a *triangle with equal sides.* Each fold should be carefully made and firmly pressed. Now request the pupils carefully to unfold the circle, and to tell what they find in it — *six equal-sided triangles*, meeting around a center and forming a *hexagon.*

Octagon. — For another exercise give the pupils *square pieces of paper*, and direct them to fold the square *diagonally* and to tell what shape they have made; then direct them to fold this right-angle triangle in halves; then to fold the triangle thus formed in halves. Request the pupils to observe that each folding forms a *right-angle triangle.* Direct them next to measure the length of the folded short side of this last triangle on its longest side; then to fold that which extends beyond the measured part so that an *acute-angle triangle with two equal sides* will be formed. If all the folds are carefully made and firmly pressed, when this square is *unfolded* there will be found *eight acute-angle triangles*, meeting around a common center, forming an *octagon.*

These foldings should be repeated three or four times, on different days, that the pupils may acquire accuracy in making the forms and facility in the folding.

THE year 's at the spring,
And day 's at the morn;
Morning 's at seven;
The hillside 's dew-pearled;
The lark 's on the wing;
The snail 's on the thorn;
God 's in His heaven —
All 's right with the world.

— ROBERT BROWNING.

DRAWING IN PRIMARY AND GRAMMAR SCHOOLS.[1]

BY WALTER S. PERRY,

Director of Drawing, Pratt Institute, Brooklyn, N. Y.

VII.

APPEARANCE OF RECTANGULAR OBJECTS IN FRONT OF AND BELOW THE EYE.

PUPILS should be led to see things through their own eyes and not through the eyes of somebody else. We are so apt to require pupils to do or to draw a thing in a certain way simply because we say it must be so done or drawn. Not that every pupil must discover everything for himself. We must make use of the accumulative knowledge of the past, but the pupil should see with his own eyes so far as possible. It is not enough to tell a class to draw an ellipse for a certain view of a circle, but the pupils must see it for themselves. For this reason they may be led to draw the appearance of the circle, as explained in the last paper. The same plan of work must be carried out in drawing rectangular objects; we are not to tell pupils that lines must be drawn to converge or to meet on a level with the eye, or that certain edges appear to slant or are foreshortened, when all this can readily be taught in any school so that the pupils may discern it for themselves. If discovered, we know they see it; if not discovered, we do not know whether it is really seen or whether they have simply accepted as a fact what has been told them, and when the position of the object is changed the pupil knows no better what to do, or how to see, than he did in the first place.

All pupils have a book of some kind. Let each select the thickest and most perfect volume and he has one of the best of models. Previous to the lesson all should be required to bring a string about one and a half yards long, and also two long pencils or a pencil and penholder, or something about the size and length of an ordinary pencil. The books are to serve as the models and they should first be drawn as though they were solid blocks of wood with straight edges and without regard to details. All should place the books well back on the desks, directly in front of the eyes, so that only the top and front faces can be seen. If the desk is not level, something must be put under the edge of each book so that it will be level. Now how many edges can be seen? Answer: Seven. How many horizontal edges can be seen? Answer: Five. Many will say "Three," counting only the edges which run from left to right; but all edges that are level are horizontal, and as the two edges representing the ends of the cover running from front to back are level we have five horizontal edges and two vertical edges to be drawn.

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[1] Copyright, 1887, by Walter S. Perry.

There will be no difficulty in showing that the edges running from left to right are to be represented by horizontal lines, but those running from front to back appear differently, and the pupils may be led to discover their appearance somewhat as follows: —

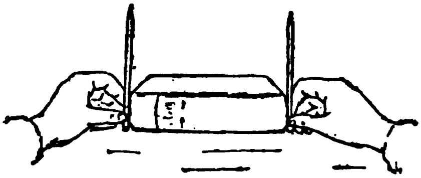


Fig. 1.

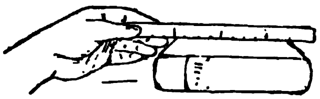


Fig. 2.

Each pupil should place a pencil vertically at each of the nearer corners of his book, as seen in the first illustration (Fig. 1). Sit well back in the seat, close one eye, keeping the open eye opposite the center of the book, and incline the pencils *toward each other* until they hide from view the left and right edges of the book. Keep them in this position for a few moments. Observe that the pencils must not be inclined forward or backward, but simply toward each other. Holding the pencils in this way the teacher may quickly pass about the room and show the appearance of the top of the book to each pupil, by placing another pencil or ruler against the pencils and at such a height as to hide the further edge from the pupil's view. The ruler is shown in Fig. 2, but the pencils are omitted in order to better show the appearance of the top of the book. The pupils will see the exact appearance of the cover between the pencils, the ruler, and the nearer edge. They should make sketches illustrating what they think they see.

Many pupils, however, will draw the appearance too wide from front to back. The next step is to determine this width by measuring with the pencil. At first it is well to have the pupil place his pencil on the book when measuring, it being within arm's reach; that is, stand the pencil in a vertical position on the center of the nearer upper edge, and by moving the finger up or down so as to cover a point on the farther edge find out how wide the top appears. Then lay off this distance on the horizontal edge and find out how many times it is contained in it; some may say three, some four, etc. Question the pupils as to the reason for this difference and it will be found that some pupils who sit higher or are taller than others look down on the book more, and to them it appears wider. If another sketch is made, the pupils should make the appearance of top from front to back one third or one fourth of the length, as the case may be.

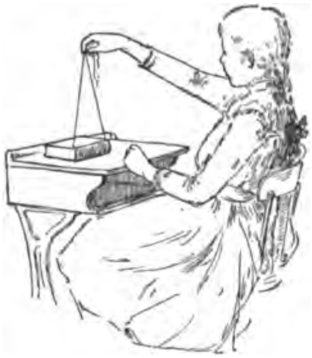


Fig. 3.

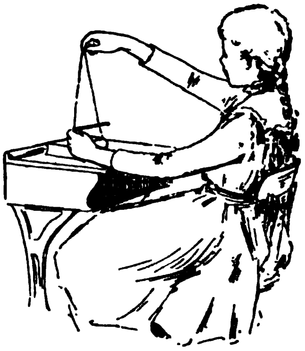
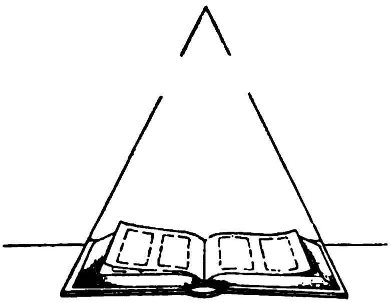


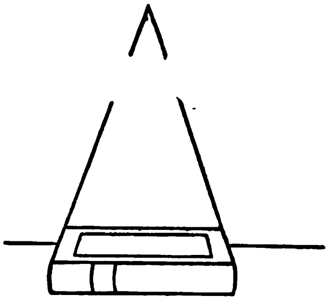
Fig. 4.

But another important step remains. It has not been decided how much the left and right edges are to slant. Each pupil should now slip a piece of string three or four feet long under the upper cover of the book as far back as the binding. Sit opposite the middle of the book, and holding the strings with one hand, move them until they hide the left and right edges of the book-cover (Fig. 3). Do not incline them backward or forward and keep one eye closed. Do they meet above, below, or on the level of the eye? If the book is level and if the strings are held so that the left and right edges of the book are covered, the strings will meet exactly on a level with the eye. Holding the strings with one hand the pupil may now hold a ruler against them so that the lower edge of the ruler just hides the farther edge of the cover, and observe again the apparent shape of the cover as enclosed between the strings and the ruler (Fig. 4). Place the book up higher, on other books, and use the strings again, and it will be found that the strings meet at a point nearer the book but on a level with the eye. Try the experiment with the book at different heights above and below the eye, but always in a horizontal position.

Thus each pupil proves that the cover of the book, although oblong in shape, appears as a four-sided figure having two parallel horizontal sides, but the left and right sides incline toward each other, and that parallel horizontal edges retreating from the eye appear to converge and, if continued, will meet on a level with the eye, as shown by the strings.

To draw the book now it should be put, if possible, farther away on a desk in front, so that the general appearance will make a better picture. (1) Draw an oblong of the proportions of the nearer upright face. (2) Decide how many times the thickness of the book the eye is above it, and place or determine a point the same proportional distance above the drawing. This point may be above the drawing-book on the desk somewhere, but should be definitely located. (3) Draw lines from each end so that they will incline toward this point. (4) Measure on the pencil, held vertically, the distance between the nearer and the farther edge. Compare it with the length of the nearer edge and draw a horizontal line the proportionate distance above, to represent the farther edge. See drawings below and illustrations in last number. The pupils should draw books of different sizes and proportions, both open and closed; also, boxes and other rectangular objects placed directly in front of the eye.





In the next paper objects will be considered as they appear when turned, at an angle.

THE HISTORY OF OUR COUNTRY: HOW TO TEACH IT.[1]

BY WILLIAM A. MOWRY.

IV.

GEORGE WASHINGTON.

[At the close of the Friday's lesson in the history of our country the following "general exercise" was arranged for.]

WE have now finished our first brief course upon the colonial period of our country and the War of the Revolution. We have gathered the leading facts and general drift of events through these two periods. We are to consider next the United States as a nation. Will you tell me who you think was the central figure, the most important character at the close of the colonial period?" (The whole school respond at once) "George Washington."

"Will you tell me upon whose efforts the success of the Revolution most largely depended, or, in other words, who performed the most important service in securing independence for the country?" (The whole school again respond simultaneously) "George Washington."

"Several of you have asked me if you could not have a 'joint exercise' next Monday, and some others within the past week have suggested an exercise on George Washington. I know you will all be interested in such a lesson. I think, however, that you will find so much to read upon the subject and will become so much interested in it that we had better give you a longer time for preparation. I suggest, therefore, that we have a general exercise upon Washington next Friday, and I will appoint Thomas Henry to read us a very brief biographical sketch of Washington, giving the facts and dates of his life in the smallest possible compass. I will ask Lucy Lamont to tell us something concerning Mount Vernon. James Jackson may read a composition of not over two hundred words upon 'Washington, the Father of his Country.' I hope you will all study the subject, and that you will read from as many different sources as possible, so that we may have a very interesting and useful discussion of this important character in our history."

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[1] Copyright, 1888, by William A. Mowry.

(During the following week Washington was the common theme of conversation among the pupils of this school. When Friday afternoon came the class in history were full of interest and some of them boiling over with enthusiasm for the lesson.)

"Well, Thomas, we will begin our lesson this afternoon with your biographical sketch."

"Of course," says Thomas, on rising to read, "I could n't make this very original because it would n't be proper to invent the facts and dates. The most condensed account that I could find was in Drake's Dictionary of American Biography."

"George Washington, the first President of the United States, was born at Bridge's Creek, Westmoreland Co., Va., February 22, 1732, and died at Mount Vernon, December 14, 1799. He was the fourth son of Augustine. John, his ancestor, came to Virginia about 1657. He was educated by a private tutor, and became a surveyor. He was appointed adjutant-general in 1751. In March, 1754, he was appointed lieutenant-colonel; he was volunteer aid to General Braddock at the battle of Monongahela, July 9, 1755. On the sixth of January, 1759, he was married to Martha, widow of John Parke Custis, and daughter of John Dandridge. He was a member of the Virginia House of Burgesses from 1760 to 1775. He was appointed a delegate to the First Congress, September, 1774, and to the second, May, 1775, by which, on June 15, he was chosen commander-in-chief of the American army, and took command at Cambridge, July 3. He forced the British to evacuate Boston, March 17, 1776; lost the battles of Brooklyn, August 27, White Plains, October 28; gained the victories of Trenton and Princeton, December 26 and January 3; and was defeated at Brandywine, September 11, 1777, and at Germantown, October 4, 1777. He fought an indecisive battle on the twenty-eighth of June, 1778, at Monmouth, and in conjunction with the French army of Rochambeau and the fleet of De Grasse, captured the army of Cornwallis at Yorktown, October 19, 1781, virtually ending the war. December 23, 1783, he resigned his commission and retired to Mount Vernon. He was the president of the convention that framed the United States Constitution, 1787. He was inaugurated President of the United States at New York, April 30, 1789, and retired to private life on the expiration of his second term, March 4, 1797. In September, 1796, he published his farewell address. Ramsey, Marshall, Bancroft, and Irving have each written the life of Washington, and Sparks has written twelve large volumes on the life and correspondence of Washington."

"How old was Washington at the time of Braddock's defeat?"

"He was a little over twenty-three years of age."

"How old was he at the time of his marriage?"

"Nearly twenty-seven."

"When he was elected member of the Virginia House of Burgesses?"

"Twenty-eight."

"When he became delegate to the First Congress?"

"Forty-two."

"When chosen commander-in-chief of the American army?"

"Forty-three.

"You will notice that he matured early and took important responsibilities before he arrived at what is ordinarily called 'middle life.'"

"How old was he when Cornwallis surrendered?"

"Forty-nine."

"When he became President?"

"Fifty-seven."

"How old was he when he died?"

"Not quite sixty-eight."

"We will now listen to James's composition."

(For want of space James's essay is omitted. The discussion of it was continued at some length, and finally closed as follows:)

"So you discard the story of the hatchet, do you?"

"Yes, ma'am, I do. I don't think there is any truth in it."

"What reason have you for disbelieving it?"

"My father says he don't believe it, and my uncle, John Gage, knows more about the history of our country than anybody else that I know of, and I heard him tell father that he did not think there was any good authority for it."

(Here Clinton Fiske is wildly gesticulating with his hand.)

"Well, Clinton, what is it?"

"Please, ma'am, Willie Hart and I went over to the public library the other day and asked one of the librarians about that, and she brought us ever so many books and found the places and we three studied it up together, and nobody tells anything about that hatchet story except old Mr. Weems, and nobody believes anything he says."

"Well, Willie, did you agree with Clinton's conclusions?"

"Yes, ma'am. Mason L. Weems, an Episcopal clergyman, about seventy-five years ago traveled all through the South, selling books. He was a great wit, and he wrote the lives of Marion, Franklin, William Penn, and George Washington. He is n't considered good authority at all."

"Well, I think we shall be obliged to discard that story. Lucy, what can you tell us about Mount Vernon?"

Mount Vernon.

"Mount Vernon was the home of Washington. It is situated on the right bank of the Potomac, seventeen miles south of the capital. It formerly included a wide tract of eight thousand acres. The Washington mansion, with two hundred acres of land, is now owned by the Mount Vernon Ladies' Association, who purchased it about thirty years ago for $200,000; of this sum, $68,494.59 were a contribution from Edward Everett, being the proceeds of his famous lecture upon 'The Life and Character of Washington,' and his writings for The New York Ledger. The house is a large wooden structure, two stories in height, with a broad piazza extending the entire length of the house on the river-side. The house was built by Lawrence Washington in 1743. He named it Mount Vernon in honor of his highly esteemed superior officer in the British navy, Admiral Vernon. After the close of the Revolutionary War, General Washington added the north and south extensions, together with the piazza. The house is ninety-six feet long and thirty feet deep. It stands on a high bluff overlooking the Potomac, and its generous lawns, gardens, and encircling forests present a scene of rare beauty. Here is the tomb of Washington, which is visited by thousands of people from all parts of the world. During the year 1876 forty-five thousand persons visited Mount Vernon."

(The subject of Mount Vernon is now discussed by the class at considerable length, and the exercise closes as follows:)

"Willie Hart, you have something to say; what is it?"

"I went to Mount Vernon last summer with my father."

"Well, what can you tell us about it?"

"There were a great many things which interested me very much, but I wanted to tell you about a very curious and wonderful eulogy which hangs in a frame on the walls of one of the rooms. It is a beautiful tribute to Washington and was written at his grave in 1833, by Dr. Andrew Reed, an English philanthropist, and left by him with the Washington family. Dr. Reed asks: 'How could the people suffer Mount Vernon to pass into ruin? Surely it is a thing impossible!'"

WASHINGTON,
THE BRAVE, THE WISE, THE GOOD.
WASHINGTON,
SUPREME IN WAR, IN COUNCIL, AND IN PEACE.
WASHINGTON,

VALIANT WITHOUT AMBITION;	DISCREET WITHOUT FEAR;	CONFIDENT WITHOUT PRESUMPTION.

WASHINGTON,
IN DISASTER, CALM; IN SUCCESS, MODERATE; IN ALL, HIMSELF.
WASHINGTON,
THE HERO, THE PATRIOT, THE CHRISTIAN;
THE FATHER OF NATIONS, THE FRIEND OF MANKIND; WHO,
WHEN HE HAD WON ALL, RENOUNCED ALL,
AND SOUGHT,
IN THE BOSOM OF HIS FAMILY AND OF NATURE,
RETIREMENT,
AND, IN THE HOPE OF RELIGION,
IMMORTALITY.

"Well, children, you have made a very interesting exercise this afternoon upon Washington and Mount Vernon. It is to be hoped this wonderful place will continue to receive pilgrims from all parts of the world who come to pay a sincere tribute of respect to the great man who once lived there and to whom our countrymen owe so much.

"As the old homestead recovers from its long neglect; as intended restorations and suggested improvements are yearly made; as the contributions of interesting relics increase, — so will the spot, more than any other sacred with the memories of Washington, become dearer to the people of this country.

"'There dwelt the *man*, the flower of human kind,
Whose visage mild bespeaks his nobler mind;
There dwelt the *soldier* who his sword ne'er drew
But in a righteous cause — to freedom true.
There dwelt the *hero* who, devoid of art,
Gave sagest counsels from an upright heart.
And O Columbia! by thy sons caressed,
There dwelt the *Father* of the realm he blessed,
Who no wish felt to make his mighty praise,
Like other chiefs, the means himself to raise;
But there retiring, breathed the pure renown,
And felt a *grandeur that disdained a crown.*'"

LANGUAGE LESSONS AND EXERCISES.[1]

BY L. W. RUSSELL, A.M.

X.

PREPOSITIONS.

THE study of *prepositions* necessarily involves a recognition of *prepositional phrases;* that is, of prepositions with their objects. As sentence elements, these phrases are readily seen to be, in many instances, the equivalents of simple adjectives and adverbs. Some notice of such phrase elements comes naturally with the exercises upon the adjective and the adverb. In fact, the simple part of speech and the equivalent phrase may well be studied together.

But at this point, while the nature and use of prepositional phrases should be clearly brought to view, it will be the special purpose of this number to show the offices of the preposition itself, and to guard against its improper use. The fact should be shown that each preposition has in itself a modifying effect, independent of its object, or complement. Thus, such common prepositions as *in*, *into*, *by*, *from*, *over*, *under*, *with*, *beyond*, *at*, *to*, etc., have, in themselves, meanings which children readily grasp and apply.

A matter which should receive constant attention in this subject is the use of appropriate prepositions to follow certain words and phrases. The frequent errors in respect to the use of certain prepositions, observable in common speech, emphasize the need of vigilance in teaching children their proper application.

Most of the text-books upon grammar give carefully prepared lists of words followed by appropriate prepositions. Such lists should be at hand for class use. One of the best for reference may be found in Bullion's English Grammar. The pupil's vocabulary and his skill in the use of language will grow as he takes up, one by one, and applies, in full sentences, such expressions as, approve *of*, confide *in*, arrive *at*, assure *of*, capacity *for*, dissent

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[1] Copyright, 1887, by Eastern Educational Bureau.

from, exclusive *of*, contrast *with*, and many others which belong to common speech. So, also, it should be noticed that the preposition used should be in accord with the object which follows it; as, die *of* a disease, *by* an instrument, *for* another; divide *between* two, *among* more than two; fall *under* disgrace, *from* a height, *into* a pit, *upon* an enemy.

Teaching.—1. Show the office of prepositions as *relation* words by such changes as the following:—

The bird flew *over* the tree; the bird flew *under* the tree; the bird flew *into* the tree; the bird flew *through* the tree; the bird flew *around* the tree.

Call attention to the fact that the relation of the flying of the bird to the tree is shown by the words *over*, *under*, *into*, etc., and show that the relation changes with the variation in the words which show it. Multiply such illustrations until the effect of the preposition is seen.

2. Point out its *connective* use by showing the lack of connection between the object and the word to which it belongs, when the preposition is omitted.

3. Show by numerous illustrations that prepositional phrases are often used as substitutes for adjectives and adverbs, and *vice versa.* Also call attention to the enriching of our language by this means.

4. Give the *name* of the part of speech under consideration, and the significance of the name—*placed before* (its object).

EXERCISES.

1. The following list of prepositions is suggested as important for use in the following exercises: about, on, above, before, down, over, toward, towards, across, behind, during, past, after, below, under, against, beneath, underneath, along, beside, besides, from, unto, amidst, between, betwixt, into, through, upon, among, amongst, beyond, with, around, of, off, within, at, by, to, without.

2. Use *at* in sentences with appropriate words to follow it; as, John studies *at* home; the President arrived *at* Boston.

Use *to* in place of *at*, making the necessary changes; as, He will go *to* his home; the party went *to* Boston.

Use *to* and *at* in the same sentence; as, The party went *to* Boston and stopped *at* the Revere House.

Use in a similar manner other prepositions liable to be misplaced; as, *on* and *upon*; *across* and *over*; *below* and *under*; *in* and *into*; *along* and *beside*; *of* and *from*; *after* and *from*; *of* and *for*, etc.

3. In the sentences written, name the words between which the prepositions show relation; also tell the *kind* of relation which exists; as, Habits *of industry* — *adjective* relation of quality; equivalent to, *industrious* habits. He spoke with cheerfulness — adverbial relation of manner; equivalent to, He spoke *cheerfully*.

4. Change the adverbs in the following sentences to equivalent prepositional phrases.

He spoke easily.
The messenger went hastily.
The waves dashed furiously.
He stopped here.
When shall I see you?
He labors patiently.

Changed. — He spoke with ease; The messenger went in haste, etc.

Change the adjectives in the following sentences to equivalent prepositional phrases.

An *Irish* emigrant took the place.
A *wooden* house was erected.
The family chose a *suburban* residence.
A *morning* ride is refreshing.
Solomon's temple was destroyed.
Wealthy people should help the poor.
Garden plants need attention.
Industrious habits bring their reward.

Changed. — An emigrant *from Ireland* took the place; The family chose a residence *in the suburbs*, etc.

Explain fully the relations shown by the prepositions.

5. (*a*) Construct sentences in which *of*, *from*, or any other preposition, with a noun, shall describe a noun.

(*b*) In which *after*, *before*, *at*, *in*, *about*, *between*, *till*, *to*, with a noun, shall denote the time of an action.

(*c*) In which *aboard*, *across*, *against*, *along*, *among*, *at*, *in*, *on*, *over*, *under*, *up*, *upon*, *round*, *to*, *toward*, *behind*, *below*, *beyond*, with a noun, shall denote the place of an action.

(*d*) In which *by*, *out of*, *from*, with a noun, shall denote the source, cause, or origin of something.

(*e*) In which *with*, *in*, *by*, *on*, *within*, with a noun, shall show the manner of doing a thing.

Write sentences in which each of the following words shall precede an appropriate preposition: *Accuse*, *acquaint*, *adapt*, *agree*, *arrive*, *averse*, *careful*, *careless*, *charge*, *compare*, *connect*, *copy*, *correspond*, *die*, *differ*, *entrance*, *expert*, *familiar*, *impatient*, *influence*, *interfere*, *profit*, *provide*, *reconcile*, *reduce*, *rely*, *suitable*, *unite*; as, He was *accused of* theft; The neighbors became *reconciled to* each other; His actions cannot be *reconciled with* his words.

Remark. — Some of the exercises given in this number may be too difficult for beginners. They should be graduated according to the age and attainments of the pupils.

COMPOSITION EXERCISE.

Each pupil bring to school a specimen of some article used as food, telling, first orally, then by writing, as much about it as he can. These specimens should include foreign as well as domestic articles. Tell: —

1. Where the articles originally came from.
2. How they grew or were produced.
3. How they were prepared for market.
4. By what means they were brought to market.
5. How they are sold and the prices.
6. What changes are made, by cooking or otherwise, in preparation for the table.
7. The benefit to us of the trade and transportation by which so many useful articles are brought to us.

No book is worth anything which is not worth *much*, nor is it serviceable, until it has been read, and reread, and loved, and loved again; and marked so that you can refer to the passages you want in it, as a soldier can seize the weapon he needs in an armory. RUSKIN.

METHODS OF TEACHING ARITHMETIC IN PRIMARY SCHOOLS.[1]

BY LARKIN DUNTON, LL.D.,

Head Master of the Boston Normal School.

XIV.

DIVISION.

THERE are two kinds of division, namely, separating a number into equal parts, and finding how often one number is contained in another. As an example of the first kind, suppose 6 children have 48 cents, and the question is, How many cents will each child have, if the cents are equally divided among them? We reason that each child will have one sixth of 48 cents, or 8 cents. Here is an actual division, a separation of the 48 cents into 6 equal parts.

As an example of the second kind of division, let the question be, Among how many children can 48 cents be divided if each child receives 6 cents? We reason thus: From 48 cents 6 cents apiece can be given to as many children as the times that 6 cents can be taken from 48 cents, or the times that 6 cents are contained in 48 cents, namely, 8 times; hence, among 8 children. Here we have found how many times 6 cents are contained in 48 cents.

In both of these examples the number 48 is divided into 6 equal parts; but while the answer to the first question is 8 cents, the answer to the second is 8 children. From these examples it appears that the solution should always correspond to the question. A confusion of the ideas involved in these two processes is a sign of a thoughtless solution. The teacher should guard against this confusion from the first, and never allow such solutions as the following: —

1. If 48 cents are divided equally among 6 children, each child will receive as many cents as 6 is contained in 48. Six children are not contained in 48 cents. Here 6, that is, 6 cents, is contained in 48, that is, 48 cents, 8 times, and not 8 cents; and the

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[1] Copyright, 1887, by Larkin Dunton.

comparison is really between the number of cents and the number of times that 48 contains 6. A better solution would be this: Each child would receive one sixth of 48 cents, or 8 cents.

2. Among how many children can 48 cents be divided, if each child receives 6 cents? One-sixth part of 48 is 8; therefore, 8 children. But 48 was 48 cents, and not 48 children. A better solution would be this: If each child receives 6 cents, 48 cents could be divided among as many children as the times that 6 cents could be taken from 48 cents, namely, 8 times; hence, among 8 children.

Both forms of division must be made clear to the pupils through practical problems; for both forms are of equal use.

Division, as soon as it deals with numbers beyond the multiplication table, is a very complicated process; hence it is necessary to be very patient in teaching it, and to proceed very gradually from the easier to the more difficult. If the first difficulties are really overcome, much has been done to lighten the subsequent work.

DIVIDING BY TWO.

First Exercise.

Let the children add 2 successively to 2, 4, etc., so as to form the numbers 2, 4, 6, 8, 10, etc., to 20.

Question thus: How many are 2×2? 3×2? etc. Two in 2 how many times? In 4? In 6? etc. How many times can 2 be taken from 2? From 4? etc. How many twos in 2? In 4? etc.

Give this question: Two children are to divide 12 cents equally; how many will each child receive?

Although the children are prepared, from what they have already learned, to answer this and similar questions, yet, partly to prepare them for the succeeding stage, and partly to show the teacher by an example how to manage when the difficulties involved appear in a new place, we will explain the process of working. In this example the teacher may use the cents themselves first, then marks upon the board. The latter may be arranged as those below. Having written A and B, place first a circle for a cent which A is to take, then under it one for a cent which B takes, and so on till the 12 are represented.

A. o o o o o o
B. o o o o o o

Each has taken 6 cents. When a number is divided into 2 equal parts, each part is a half. The half of 12 cents is 6 cents; the half of 12 is 6.

In the same way develop the idea of the half of 2, 4, 6, 8, 10, 12, 14, 16, 18, 20.

Second Exercise.

Two children have 15 apples, how many has each?

Of 14 apples each has 7 apples;
„ 1 apple „ „ ½ apple.
„ 15 apples „ „ 7½ apples.

In the same way treat 3, 5, 7, 9, 11, 13, 15, 17, and 19.

Third Exercise.

Draw on the board two rows of circles with 10 circles in each row. This will show that half of 2 rows is 1 row; half of 2 tens is 1 ten; half of 20 is 10.

In the same way may the idea of half of 20, 40, 60, 80, and 100 be developed.

The numbers 2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 40, 60, 80, and 100 can be divided immediately, that is, without being separated into parts, because they appear in the twos of the multiplication table, if we regard 20, 40, etc., as 2 tens, 4 tens, etc. Numbers which do not so appear must be separated.

Fourth Exercise.

Two persons together have 4 ten-cent pieces and 8 cents; how shall they divide them?

Each person takes 2 dimes and 4 cents, equal to 24 cents; so half of 48 is 24.

Or the teacher may write on the board 4 rows of 10 circles each, and 8 circles. Half of 4 rows is 2 rows; half of 8 circles is 4 circles; half of 4 tens is 2 tens; half of 40 is 20; half of 8 is 4; therefore, half of 48 is 24.

So may be developed the idea of half of those numbers whose tens and units are even numbers — 22, 24, 26, 28; 42, 44, 46, 48; 62, 64, 66, 68; 82, 84, 86, 88.

Fifth Exercise.

Two persons have 3 dimes; how can they be divided? Each takes 1 dime, equal to 10 cents. They then exchange the other dime for 10 cents, and each takes 5 cents; so that each has 10 cents.

Or the teacher may draw on the board 3 rows of 10 circles each. Half of 2 rows, or 20, is 10; and half of the other row is 5; so that the half of 30 is 15.

Treat 50, 70, and 90 in the same way.

Sixth Exercise.

Show on the numeral frame 3 rows of 10 balls each, and 1 row of 6 balls. What is half of them?

Half of 2 tens is 1 ten, and the other ten balls added to the 6 make 16 balls. Half of 16 is 8; so half of 36 is 1 ten and 8, or 18.

Or this: Divide 3 dimes and 6 cents equally between two persons. Let each take 1 dime; exchange the other dime for 10 cents, which added to 6 cents make 16 cents. Let each take 8 cents, which with the dime make 18 cents.

So treat 32, 34, 36, 38; 52, 54, etc.; 72, 74, etc.; 92, 94, etc.

Seventh Exercise.

What is half of 49 apples?

Half of 40 apples is 20 apples;
„ 8 „ 4 apples;
„ 1 apple is ½ apple.
„ 49 apples is 24½ apples.

So treat all numbers which have even tens and odd units: 21, 23, 25, 27, 29; 41, 43, 45, 47, 49; 61, 63, etc.; 81, 83, etc.

Eighth Exercise.

What is half of 57?

Half of 40 is 20;
„ 16 „ 8;
„ 1 „ ½.
„ 57 „ 28½.

Treat in the same way all numbers whose tens and units are odd numbers: 33, 35, 37, 39; 53, 55, etc.; 73, 75, etc.; 93, 95, etc.

THE STUDY OF SYNONYMS.

ADVERTISE AND PUBLISH.

1. Both are derived from the Latin.
2. Both mean to make known.
3. ADVERTISE denotes the means, and PUBLISH the end.
   To ADVERTISE is to direct public attention to any matter by means of a printed circular. To PUBLISH is to make known either by oral or printed communication.
4. "Every man that ADVERTISES his own excellence should write with some consciousness of a character which dares to call the attention of the public."
   "The criticisms which I have hitherto PUBLISHED have been made with an intention rather to discover beauties and excellences in the writers of my own time, than to PUBLISH any of their faults and imperfections."

PALE, PALLID, WAN.

1. PALE and PALLID are derived from the Latin.
   WAN is derived from the Anglo-Saxon.
2. Their common meaning is, deficient in ruddiness and freshness of color.
3. The absence of color, where color is a requisite quality, constitutes PALENESS.
   PALLIDNESS is an excess of PALENESS, and WANNESS is an unusual degree of PALLIDNESS.
   PALENESS in the countenance may be temporary and may be produced by fear or any sudden emotion.
   PALLIDNESS and WANNESS are permanent. Protracted sickness, hunger, and fatigue bring on PALLIDNESS, and when these calamities are greatly heightened, they may produce WANNESS.
4. "Now morn, her lamp, PALE glimmering on the sight,
   Scattered before her sun reluctant night."
   "Her spirits faint, her cheeks assume a PALLID tint."
   "And with them comes a third with regal pomp,
   But faded splendor WAN."

PARABLE AND ALLEGORY.

1. Both are derived from the Greek.
2. Both these terms imply a veiled mode of speech, which serves more or less to conceal the main object of the discourse by presenting it under the appearance of something else which accords with it in most of the particulars.
3. The PARABLE substitutes some other subject or agent who is represented under a character that is suitable to the one referred to.

   In the ALLEGORY are introduced strange and arbitrary persons in the place of the real personages, or imaginary characteristics and circumstances are ascribed to real personages.

   The PARABLE is a principle employed in the sacred writings; the ALLEGORY forms a grand feature in the productions of the Eastern nations.
4. We speak of the PARABLE of the sower and of the prodigal son, but we call Bunyan's Pilgrim's Progress and Spenser's Faëry Queene celebrated examples of the ALLEGORY.

DANGER AND PERIL.

1. Both are derived from the Latin.
2. Both refer to loss or damage.
3. DANGERS are far and near; they meet us if we do not go in search of them. DANGER is a generic term.

   PERILS are always distant and extraordinary; we must go out of our course to expose ourselves to them. PERIL is instant or impending DANGER.
4. In the quiet walk of life, as in the most busy and tumultuous, it is the lot of man to be surrounded by DANGER.

   The mariner and the traveler who go in search of unknown countries put themselves in the way of undergoing PERILS both by sea and by land.

EDITORIAL.

THE EASTERN EDUCATIONAL BUREAU takes pleasure in announcing that Mr. M. T. Rogers, lately of the firm of Silver, Rogers, & Co., publishers, has now associated himself with this corporation, and that he will hereafter act as treasurer and give his personal attention to its business management, including the affairs of the *Teachers' Agency* department. Mr. Rogers is too well known to the business community and especially to the teachers and school authorities of New England, to need any word of commendation. During the last half-dozen years few men have had a wider acquaintance or a better reputation among the superintendents, school committees, and teachers in this section of the country. He organized our *Teachers' Agency* under the name of the *Eastern Educational Bureau*, which name has since been applied to the entire business, and by his good judgment, fair dealing, and gentlemanly manners secured for it a high degree of success and popularity. In this department of our business, as well as in other lines, we feel confident that his return to the *Bureau* will give great satisfaction to both superintendents and teachers, as well as add much to the efficiency of our *Agency* as a medium for supplying competent teachers for all grades of school work. With the addition of his services and influence we feel justified in believing that we have the very best facilities for filling any position, from that of a teacher in a primary or ungraded school, to that of a college president or a city or state superintendent; also, for securing the best places to competent teachers and superintendents of all grades. We therefore unhesitatingly ask teachers and school officers in all parts of the country to place their business in our hands, assuring them that they will receive from us promptness, fair dealing, and good judgment.

The rapid increase of the business of the *Eastern Educational Bureau* since its organization, less than one year ago, is without precedent. EDUCATION at that time had a fair list of subscribers, which list has been constantly and regularly increasing every month since. COMMON SCHOOL EDUCATION had but just been started, and had then less than five hundred subscribers. Now its regular edition is between six thousand and eight thousand, and will soon be ten thousand. Our *Teachers' Agency* is taking the lead in supplying the best teachers and finding for such teachers places for which they are best adapted. *Dunton's Arithmetic Charts* have been published and are receiving the highest commendations from teachers and superintendents in all parts of the country. Mr. Rogers brings with him the general agency of Stanford's well-known Wall Maps, which are universally admitted to be "the best," and a new township wall map of the State of Massachusetts, which is pronounced by all "a perfect gem," and which is having a very large sale. We are now republishing several of the important series of articles which have appeared during the past year in COMMON SCHOOL EDUCATION.

50 BROMFIELD STREET is becoming generally known as *Educational Headquarters*, where can be found the best teachers' aids and *Handy Help Series* for practical assistance in the various departments of teachers' work. COMMON SCHOOL EDUCATION offers to thoughtful teachers from the pens of the leading educators in the country the best methods of teaching the various branches in our common schools. This effort to elevate common school teaching to a higher plane and better style of work is receiving a very cordial response from the teachers of the country. Seldom, if ever, has the subscription list of a teachers' paper received so rapid an increase.

We desire to express our hearty thanks to all those who have in any way shown their appreciation of our efforts to elevate the teacher's profession and to improve our school system. We have brought to the work a long and varied experience in educational affairs, some little study of educational principles, methods, and appliances, and an earnest, life-long purpose to do all that can possibly be done to uplift the teachers and their methods of work in our American schools.

WE publish this month the first of a new series of articles by Miss Badlam, entitled "Practical Methods of Teaching Spelling." The author has given the subject close study, and the plan of work she offers to our readers has stood the severe test of the school-room. The opening chapters bear directly upon the importance of the early training of the *ear*, the *voice*, and the *eye*. Outline lessons follow, to illustrate the different lines of work. These outline lessons are designed for board work, and give the teacher abundant opportunity to show the effect of the change of a single letter in a word, either by change of initial consonant, change of final consonant, change of vowel, or by the addition of a silent letter, and enable her to teach also the natural formation of a word from a simple stem, by the use of a prefix or a suffix. The author aims to economize time and space, and utilizes every opportunity to make the work of practical value to the child.

In a word, he is trained to help himself, and gains through these lessons in observation and practice a valuable knowledge of the formation of words and their use in oral and written sentences.

THOUGH nothing can quite take the place of early home-training in the little forms and usages of polite society, seemingly so small in themselves and still so necessary to make life pleasant and happy, yet the school can do much toward supplying the deficiency and teaching the children to be, in the good old-fashioned meaning of the words, gentle men and gentle women. If a boy is never allowed to be rude in word or deed, he ceases to be rude in thought and feeling, and though polish in itself is not enough, yet as the sign of an inward grace it is very lovely to see. Do not forget, teachers, that the boys and girls who are allowed to be rude while they are young will be very apt to remain rude and uncouth when they are grown, and it largely lies in your power to cultivate in these children grace and sweetness. Remember that early impressions last as later ones will not, and that which is made so familiar to little children as to seem almost second nature is what will stand them in stead and never fail them.

HAPPY HOURS.

ARRANGED BY MRS. CAROLINE S. MORGAN.

A LITTLE GIANT.

I KNOW a little giant, no bigger than a tack,
Who can wrestle with a fat man, and throw him on his back;
His knotted little muscles, almost too small to spy,
Could turn you topsy-turvy, and hardly seem to try.
To tweak the nose, and pinch the toes, and fill one full of woe,
Are jokes the midget loves to play alike on friend and foe.

But he can do still greater things than make a big man squeal —
He can split a stone in splinters, or break a bar of steel;
He can shape the dripping eaves' drops into a crystal spear,
And clutch the falling rain so hard, 't will turn all white with fear;
He can chain the dashing river, and plug the running spout;
He can build a wall upon the lake and shut the water out.

But if you want to see this little giant cut and run,
Just build a tiny fire, or step out and fetch the sun.

— *Selected.*

THE LITTLE STONE BOY.

(RECITATION.)

HE stood in a fountain and held up a shell,
From which a bright shower of diamonds fell,
Just catching the glance of the sunshine which played
Bo-peep in and out of the jessamine shade;
And back at the children, who laughed up in joy,
He laughed, as they called him the Little Stone Boy.

He laughed at the dew and he laughed at the flowers,
Which smiled up at him through the long summer hours;
He laughed as the robin and bluebird and jay,
Just ceasing a moment their caroling gay,
Came peeping and hopping, with coquetries coy,
To flit round the feet of the Little Stone Boy.

He laughed when the flowers were drooping and dead,
And autumn was painting in gold and in red;
And bleaker and lower the gloomy clouds hung,
Awaking no gleam in the waters he flung —

For nothing of shadow could dim or alloy
The gladness and mirth of the Little Stone Boy.

But soon, shaken down from the feathery wing
Of the blast bearing onward the chilly Ice King,
The fast-whirling snow lay a covering white
Over garden and lawn. And the children at night
Looked up with a whisper, from picture and toy:
" He has n't a coat on — poor Little Stone Boy! "

But morning, all beaming with sparkles of light,
Brought forth in the brightness each frolicsome wight,
To see if the spirit of winter could quell
The smile of the sprite of the fountain and shell.
" Ho! ho! he is dressed! " cried a chorus of joy,
" And laughing as ever — the jolly Stone Boy! "

The Snow Queen had tenderly woven for him
A mantle, hung softly o'er each little limb;
An icicle coronet shone on his head —
" Jack Frost made it for him," the little ones said.
Thus decked with the treasures of winter, he bore
As proudly his burthen aloft as before,
And laughed at the storm which could never destroy
The happy, hilarious Little Stone Boy.

— *Sydney Dayre.*

A GREAT IMPROVEMENT.

RECITATION.

YOUNG Archibald Albert, an orderly boy,
Once had, to his very great pleasure and joy,
An autograph album presented to him.
Its pages were neat and its covers were trim.
Within its gay bindings of superfine leather
He promptly endeavored to gather together
The names of his every relation and friend,
Till the book should be filled from beginning to end.

But soon he perceived, with surprise and dismay
And disapprobation, the very strange way
In which people wrote in his elegant book —
He found it distressing to give it a look.
Some autographs proved such a tangle and scrawl
You scarce could determine their letters at all;
While others were crooked, and some seemed to stray
To the edge of the page, as if running away.
Some looked as if caught in a terrible gale: —
His grandfather's trembled; grandmother's was pale;
His father's was blotty and straggled awry;
His mother wrote nicely — he begged her to try.

He pondered the matter, then purchased another
Fine album, as bright and complete as the other,
And carefully copied the names, every one,
As neatly and fairly as it could be done.
With every angle and every line
Drawn out like a copy, correctly and fine.
With every *i* and with every *t*
Neatly dotted and crossed as they needed to be.
His letters were regular, even, and nice,
His capitals stately, exact, and precise.

Then Archibald Albert, in viewing the whole,
Breathed a sigh of relief from his orderly soul,
And exclaimed to himself: "It is better, by half,
Than letting each one write his own autograph!" — *St. Nicholas.*

EFFIE'S THOUGHTS.

(For four little girls.)

I WONDER why, when summer comes,
  We think we never want to see
The cold, bleak winter-time again,
  Which robs the leaves from every tree?
I wonder why we think the earth
  Grows fairer then than e'er before,
And long that in its hills and fields
  Green grass might lie forevermore?

And, oh, I wonder why, at last,
  When summer yields to winter's reign,
We all forget its sunny days,
  And welcome winter's sports again?
I wonder why we give no sigh
  To summer's gifts that lie below
The ice on which we love to glide
  And 'neath the fleecy, feathery snow?

Oh, well, the dear blue sky above
  Holds sunshine for us all to see.
Tho' summer-time, or winter come,
  Some pleasant things each brings to me.
With summer, glad *vacation* comes,
  And I can spend it midst the flowers
That bloom and grow, and help to make
  So sweet the happy golden hours.

And winter-time brings *Christmas* cheer,
  And many a frolic in the snow!
All boys and girls who greet it now
  Will hate to let old winter go.
So it is best to look for joy
  And sunbeams all throughout the year,
And whether cold, or whether warm,
  We 'll love whichever season 's here. — *Mary D. Brine.*

EXAMINATION QUESTIONS.

Selected from those given at Milford, Mass., December, 1887, to Grades I, II, and III.

At the head of each sheet of paper write your name, the date, and the subject of this examination. Place before the answer the same figures that are before the question. During the examination, ask no questions about it.

LANGUAGE.

GRADES I AND II.

1. In the following sentences use a corresponding adverb for each adjective, making such changes in the words as are necessary:—

He is a rapid reader.
The whole blame is his.
He is an awkward player.

2. Write a sentence using *prince* in the possessive form, singular. One containing *sheep* in the possessive form, plural.

3. Tell the person, number, and case of each pronoun in the following sentence:—

Promise me that you will send her what she wants.

4. Compose sentences containing the relative *which* in the possessive case, and the interrogative *what* in the objective case.

5. Select the adjectives, and state the degree of comparison.

To-morrow will be the maddest, merriest day,
Of all the glad New Year.

6. Name the four moods and tell how they are used.

7. State the mood and tense of the verbs in the following:—

Up from the ground he sprang, and gazed—
  But who can paint that gaze?
It hushed their very hearts who saw
  Its horror and amaze.

8. Write a sentence, containing a verb in the active voice, and re-write it, using the same verb in the passive voice.

9. Write a sentence containing an infinitive and one containing present participle.

10. Correct false syntax in the following sentences:—

Neither the time nor the place of Homer's birth are known.
Avarice is one of those passions which is never satisfied.
I will drown and nobody shall help me.

SPELLING.

GRADE II.

1. It is a fanciful picture, made by the artist in her liveliest mood.

2. It sometimes seems as if our laws provide no remedy for robbery and larceny.

3. Not only was he a courageous soldier, but he is a peaceable citizen.

4. I will not risk the balance of my money in so hazardous an enterprise.

5. The officer was very skilful in his management of the attack.

GEOGRAPHY.

GRADE II.

1. Name the two highlands and the two low plains of North America.
2. Name the river which drains the southern part of the central plain, and give its four large branches.
3. In what part of North America is cotton the chief product?
4. Name the two largest islands of the West Indies.
5. Locate Baffin, Delaware, and Campeachy bays.
6. Locate the capes Race, Hatteras, and Flattery.
7. What is the government of Mexico?
8. Draw an outline map of South America.
9. Indicate on the map the three chief rivers.
10. Indicate the Andes and Brazilian Mountains.
11. Locate on the map Rio Janeiro, Valparaiso, Lima, Quito, and Buenos Ayres.
12. Indicate on the map where diamonds, gold, and silver are found.
13. Name five remarkable animals found in South America.
14. Where is the rainless region?
15. Describe the Selvas of the Amazon.
16. Name five large rivers of Europe.
17. Name five mountain ranges of Europe.
18. Locate Brussels, Rome, Edinburgh, Lisbon, Athens.
19. In what is the chief wealth of Great Britain?
20. What are the chief exports of France?

ARITHMETIC.

GRADE III.

Note. — Put down all calculations used in the solution of the problems.

1. Add $\frac{3}{4}$, $\frac{4}{5}$, and $\frac{7}{10}$.
2. From $9\frac{3}{8}$ take $7\frac{3}{4}$.
3. A man willed $\frac{1}{2}$ of his property to his wife, $\frac{3}{32}$ to his son, $\frac{1}{16}$ to his daughter, and the remainder to a college. What part did he give to the college?
4. When coal is bought for $7\frac{9}{10}$ a ton, and sold for \$$8\frac{1}{4}$, how much is gained?
5. Find the cost of $1\frac{1}{2}$ cords of wood at \$$6\frac{3}{8}$ a cord.
6. Find the cost of 1 yard of silk when $2\frac{2}{5}$ yards cost \$6.
7. If $\frac{3}{5}$ of a barrel of flour cost \$3.90, how many barrels can be bought for \$$71\frac{1}{2}$?
8. \$350 is $\frac{5}{8}$ of my money. How much money have I?
9. Multiply 1.44 by 1.2 and subtract the product from their sum.
10. Multiply one and fifteen hundredths by twenty-four ten thousandths, and write the product in words.

GRADE IV.

1. I have bought a house for \$7,389 and land for \$6,400. I have paid \$4,596. How much do I still owe?
2. Multiply 4,763 days by 498.
3. A merchant bought 7 bales of cotton, each bale weighing 488 pounds, at 12 cents a pound. What was the cost?

4. Mr. Clark paid $375 for a horse and $95 less for a buggy. What did he pay for both?

5. A grocer bought a tub of butter weighing 56 pounds, at 23 cents a pound; and a tub weighing 68 pounds, at 19 cents a pound. Did he gain or lose by selling the whole at 21 cents a pound; and how much?

6. Bought 20 tons of coal at $7.25 a ton, and 9 cords of wood at $4.75 a cord. What was the cost of the whole?

7. Sold 325 barrels of apples at $3 a barrel, and received in payment 218 cords of wood at $2.25 a cord. How much is still due me?

8. Divide $948.62 by 78.

9. Divide 32,555 by 305.

10. Find the cost of 53 geographies when 24 cost $18.00.

GRADE V.

1. Add, 347, 768, 632, 573, 897, and 989.

2. Multiply 483 by 76.

3. Add 47, 328. 56, 299, 987, and 86.

4. Multiply 849 by 58.

5. If you have 8 oranges and give one half of them to Grace, one fourth to John, and one eighth to Harry, and keep the rest, how many will you keep?

6. A farmer sold oats for 9 dollars and rye for 3 dollars. If he lost ⅓ of the money he received, how many dollars had he left?

7. Walter had in his library 33 books. He then bought 5 and his cousin gave him 8. How many books had he?

8. In a hopfield there are 12 rows of hops and 9 hills in each row. How many hills were there?

9. In a class there were 8 boys, and 3 times as many girls. How many children were in the class?

10. How many inches long is a stick which is 6 feet 3 inches long?

GEOGRAPHY.

GRADE III.

1. For what is Texas remarkable?
2. Describe five of its large rivers.
3. How does Texas compare with Massachusetts in area?
4. Name the chief productions of Texas.
5. Describe the commerce of New Orleans.
6. What is the Indian Territory?
7. What are the staple products of Arkansas?
8. In what part of Texas are minerals found?
9. Describe the surface of that part of Louisiana near the Mississippi River.
10. Describe Galveston.
11. Draw an outline map of the Central States, Eastern Division.
12. Draw the Wisconsin, Illinois, Rock, Wabash, and Miami rivers.
13. Indicate the position of Cincinnati, Cleveland, Detroit, Bay City, Indianapolis, Lafayette, Chicago, Quincy, Milwaukee, and Madison.
14. Where is copper found? Where is lead found?
15. For what are Cincinnati and Chicago noted?
16. What is peculiar about the surface of this group of States?
17. What are the leading pursuits?

18. Describe the climate.
19. Which State is first in production of wool? Of corn?
20. Where is a great deal of salt produced?

GRADE IV.

1. Name the Great Lakes of the United States.
2. What river is the outlet of the Great Lakes?
3. Name and locate the two chief mountain systems of North America.
4. Name five native animals of North America.
5. Name the countries of North America.
6. Describe the course of the Mississippi River.
7. What are its four largest branches?
8. Name five of the chief exports of the United States.
9. Name five of the chief imports of the United States.
10. What bay and strait between North America and Greenland?
11. What large river of North America empties into the Arctic Ocean?
12. Describe the climate of New England.
13. What are the chief commercial ports of Maine and Massachusetts?
14. What is the chief industry of Fall River?
15. For what is Gloucester noted?
16. Draw an outline map of New England.
17. Draw the Connecticut, Merrimac, and Kennebec rivers.
18. Indicate the position of Boston, Worcester, Augusta, Hartford, and Providence.
19. Indicate the Green Mountains and the White Mountains.
20. Locate Penobscot Bay, Cape Cod Bay, Buzzard's Bay, and Nantucket and Mt. Desert Islands.

◆

BOOK NOTICES.

PRACTICAL LESSONS IN THE USE OF ENGLISH. By Mary F. Hyde, Teacher of Composition in the State Normal School, Albany, N. Y. Book First. Illustrated. Boston: D. C. Heath & Co. Cloth. Pp. 116. Introduction price, 35 cents. Price by mail, 40 cents.

This series of lessons aims to aid the pupil in the use of English and to assist him in understanding its use by others. At every step the pupil is led to see for himself, thus cultivating his powers of observation. A distinctive feature of the work is the Written Exercises, which give daily practice in the use of knowledge acquired and lead to habits of independent work. The exercises in composition are exercises in the expression of thought, not mere training in the use of set forms of words. Business forms and letter-writing are given especial attention. Each lesson contains something new and attractive, and the whole work is well planned, giving a logical arrangement of matter most needed by the pupil. The Second Book will shortly be issued.

WHAT WORDS SAY. A Practical Analysis of Words for Use in Elementary Schools. By John Kennedy. New York: Kennedy & Co., publishers, 38 Park Row. Price, 35 cents.

The true scholar always wishes to get to the bottom of whatever study he is interested in. The etymologist goes back to the Latin and Greek, to the Hebrew and Sanskrit. To get to the bottom of any subject the scholar must know the meaning of words. To the classical scholar words mean something. They mean what they "say." Those who have had the advantage of a college course can obtain the meaning from the derivation of the word itself. But for those who can never go to college, it is fortunate that there is a way of getting at the exact significance of words without a knowledge of Latin and Greek. In this work Mr. Kennedy has so classified and arranged the words as to make it an easy and interesting study. He has made the words speak for themselves. Under his treatment words are no longer mere arbitrary signs, but stand out full of vigorous life. The work is adapted for the teacher or scholar, and no teacher should be without it.

MISTAKES IN TEACHING. By James L. Hughes, Inspector of Schools, Toronto, Canada. New York and Chicago: E. L. Kellogg & Co. Price, 50 cents.

We are very glad to see that E. L. Kellogg & Co. have issued a revised edition of this valuable work, and that Mr. Hughes has added a chapter on moral training and also one on the true aims of education. No teacher can afford to be without this book, for unconsciously even the most competent will contract habits which this work will serve to correct. The principal subjects treated are: "Mistakes in Aim," "Mistakes in School Management," "Mistakes in Discipline," "Mistakes in Method," "Mistakes in Moral Training." Only long experience could so fully furnish the author with materials for such sound advice.

LESSONS IN ENGLISH GRAMMAR. By Alfred H. Welsh (Ohio State University), author of English Masterpiece Course, Essentials of English, etc. Chicago: John C. Buckbee & Co. 1888. Price, 70 cents.

Grammar has always been, to many scholars, a difficult and puzzling subject. This original and practical work will make the study much better understood and more interesting. Mr. Welsh has applied the inductive method to the development of a grammar of the English language. The presentation of the subject is new and seems to be one of the best. The pupil can hardly fail of liking the subject. The work deserves the warmest praise.

STORIES FOR LITTLE READERS. By Emilie Poulsson. Chicago and Boston: The Interstate Publishing Co.

This book is intended for the children as soon as they know the consonant and short vowel sounds.

A QUIZ-BOOK OF THE THEORY AND PRACTICE OF TEACHING. By A. P. Southwick, A.M. Syracuse, N. Y.: C. W. Bardeen, publisher. 220 pp. Price, $1.

There are here about 550 questions on the theory and practice of teaching, such questions as teachers are asked on examination papers all over the land. These are answered by quotation, selection, and abridgment from the standard writers on education with a directness and point not often found. Besides the questions and answers, there are "Hints, Helps, Means, and Cautions," and "Pedagogic Mosaics," together with a fine collection of the poetry of the school-room.

THE GRAPHIC SYSTEM OF OBJECT DRAWING. Arranged by Hobart B. Jacobs and Augusta L. Brower. Elementary Course with Manual for Teachers' use. New York: A. Lovell & Co. Price, per dozen, $1.20; Manual, 50 cents.

Four books comprise this course, which is a new and explicit method of drawing from the object, based upon the methods of the best French schools of art. Each book has a number of short stories about artists. The Manual contains much that is both suggestive and practical. The authors claim for the work that it is "an arrangement of lessons not to be found elsewhere, and one calculated to call forth the interest and powers of the child."

RECEPTION DAY. No. 5. New York and Chicago: E. L. Kellogg & Co. Pp. 160. Price, 30 cents.

The teacher is always wishing for something new for "reception day." That which he has is either too old or does not seem appropriate to the occasion or is not adapted to his grade. This is another collection of fresh and original dialogues, recitations, and declamations for practical use in schools.

The School Album. A collection of new and beautiful songs for day-schools. By H. W. Fairbank. Words by Miss Minnie B. Lowry. Combined edition. Chicago: S. R. Winchell & Co. Price, 30 cents.

This bright-looking little song-book is made up of three parts: primary, intermediate, and advanced, each part being published separately at one third the price of the combined edition. The songs are such as can easily be sung by school children and will furnish abundant material with which to supplement the old tunes.

Holmes' New Series. Drawing Books for Schools and Amateurs. Chicago: C. M. Barnes.

This series is complete in three numbers, as follows: No. 1, Lineal Drawing both clear and shaded, with the curves, object, and perspective; No. 2, shaded and natural objects and perspective; No. 3, flowers and fruit from nature, shaded. There are eight pages of plates to each book. This course gives not only a knowledge of free-hand drawing, but a clear idea of perspective. A special feature of value to the teacher is the ten charts which accompany the series.

A System of Physical Culture. By Carl Betz, Superintendent of Physical Culture, Public Schools, Kansas City, Mo. Third Book. Light Gymnastics. Kansas City Press, Kansas, Mo. Price, $1.

Some form of gymnastics has become a necessity in the school-room, and it is of the utmost importance that the teacher should be able to give the children placed under her charge systematic exercises that are adapted to their age and strength. In this practical and valuable work by Carl Betz, the teacher will find clear and concise directions for exercises with dumb-bells, wands, rings, and clubs. The work is designed as a manual of instruction and gives each lesson in such a way that the reader, with a little thought, can readily understand the exact motions and positions of the different limbs during each step of the exercise. The book will be found of great value in this important branch.

The Vicar of Wakefield. By Oliver Goldsmith. Boston: Ginn & Co. Mailing price, 40 cents.

This edition of The Vicar of Wakefield is printed for use in schools and belongs to the series entitled Classics for Children. In order to meet the requirements of schools this edition has been slightly abridged, and a few obsolete or foreign expressions changed. Such notes have also been added as seemed necessary for the complete understanding of the text. In the beginning of the book is a short sketch of Goldsmith's life. This series now contains about twenty-five standard works suitable for use in the school-room.

First Term's Work in Reading. By Helen M. Cleveland. Boston & New York: Leach, Shewell, & Sanborn.

This attractive little book gives a plan and a reader for teaching very young or non-English-speaking children to read. The type is large and clear, the illustrations excellent, and the book forms a very bright and pleasing little reader.

Howells's Indian Summer, a story of American life in Tuscany, forms one of the latest issues in Ticknor's Paper Series, which has proved so successful. Price, 50 cents. Boston: Ticknor & Co.

We have received from A. S. Barnes & Co., New York, a beautiful new "Souvenir of Barnes's Penmanship." A complete description of the entire system, including fac-simile indorsements of the same by many of the prominent professional penmen of the country, is given. The beauty of the paper and mechanical execution of this souvenir cannot be surpassed.

In the Garibaldi Memoirs just issued in Florence, there is little that is new, and important passages in the book have been proved to be literally copied from the well-known Garibaldi's Life published in this country some years ago by A. S. Barnes & Co. This "Life" was edited by Theodore Dwight. A cheap cloth copy of it can be obtained by sending 60 cents to the publishers, 111 William Street, New York.

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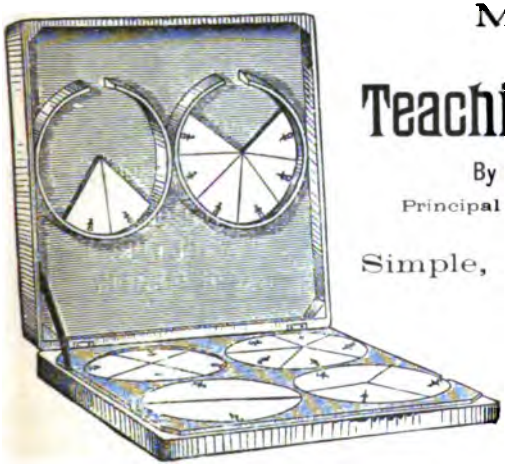

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Vol. II. MAY, 1888. No. 5.

"THE MOST WORK FOR THE LEAST PAY."

BY ALEXANDER BEVAN, A.M., MILWAUKEE, WISCONSIN.

NOT long since there appeared in one of the leading educational journals an article commending a Western superintendent of schools because he was able to secure from his teachers "*the most work for the least pay.*"

The expression of such a sentiment is an offence against righteousness, and its advocacy a serious menace to the truest interests of education. It is simply the old Roman notion that the individual exists for the State; so that if the State, or the many, can secure any service from the individual, or the few, without adequate return, the State is the gainer, and has the right so to do. It is another way of saying that might is right, which is the controlling principle of monopolies and "trusts." It is the reverse of the true principle that "right is might," that the pay should always be commensurate with the service rendered.

It must be admitted that this last is contrary to ordinary business practice; that the average business man believes in getting as much value as possible for as little return as possible. It is at the same time true that the finances of the school system should be conducted on sound business *principles;* but a vigorous protest should be entered against its management on unsound business *want of principle.* It is important to distinguish clearly between business *principles* and business *practices.* Principles are "right rules of conduct"; and a man of principle will never consciously attempt to promote the interests of one party at the expense of another. Principles are founded in justice, which says that every exchange of values should represent a true equation. Principle crucifies selfishness to build up selfhood, while practice too often cultivates selfishness to the destruction of selfhood. Now it is the purpose of education to instill principles, to train to an unflinching adherence to right rules of conduct, to beget a controlling love for the just treatment of all, to bring into effective action the grandest capabilities of the human mind, to awaken the noblest impulses of an immortal soul, to make perfect the whole man.

It seems evident, therefore, that that superintendent is most deserving of praise who secures *from* his teachers the *best* work and *for* his teachers the *best* pay, whose effort is always to bring about a fair exchange of values. The doctrine of "the most work for the least pay" is essentially selfish, since it means an increase of income for him who successfully practices it. Further, it emphasizes quantity more than quality, which is fatal to the ends of education. Dr. White has wisely observed that it is the kind, and not the amount, of experience that is of prime value to the teacher. So it is the kind of work rather than the amount the teacher does that is of first importance to the interests of education. Quantity is by no means to be ignored; but quantity and quality are most fitly combined in the principle of the most *effective* work for the least *defective* pay.

PRACTICAL METHODS OF TEACHING SPELLING.[1]

BY ANNA B. BADLAM,

Rice Training School, Boston, Mass.

II.

THE TRAINING OF THE VOICE.

THE training of the *ear* should be supplemented by special *voice-training* as soon as the child can readily recognize simple *words* when resolved into their elementary *sounds*, and can distinguish individual sounds readily enough to note the number heard in any special word.

All early voice-training should be simple, and follow rather closely

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[1] Copyright, 1888, by Anna B. Badlam.

the line of work with which the child has become somewhat familiar during the gradual training of the ear. The object of all voice-training should be to lead the child to imitate easily and accurately the sounds he hears; hence it becomes a necessity that he should be taught to *place* and to *use* the *organs of speech* correctly.

Since this early training is so important to the child, a knowledge of the details of vocal action and the development of the vocal organs becomes almost indispensable to the teacher, who is to undertake the responsibility of guiding the young child to produce naturally and successfully the elementary sounds, which, in combination, form any simple word he is in the habit of using. Often the child's careless habits of speech will delay his progress, and special care must be taken by the teacher that the movements of her mouth are as apparent to the child's sight as the sounds she utters are to his hearing.

Much individual training will be necessary before she can attempt to teach the class as a whole. In fact, all new work should be given to small groups of children, in order that the teacher may be able to detect any inability on the part of the several children to produce the sounds she wishes them to imitate. With a group of children clustered about her it will not be difficult for the teacher to indicate the particular method of producing any special sound, and thus she will avoid all danger of error on the part of any child.

When teaching some of the more difficult sounds it may be necessary for the teacher to require the child to repeat several words that contain the special sound. Take, for instance, the hard sound of *g*, always a difficult one for a young child until he is trained to notice the vibration of the throat at this sound, which is to be found not only at the beginning of one set of words, but at the end of another set with which he is familiar; as, *gun*, *get*, *good*, *girl*, *gone*, —*big*, *bug*, *bag*, *log*, *leg*, *dig*, *dug*. By having him repeat these words slowly and carefully, and directing him to place his finger at the front of the throat when he pronounces, he will soon perceive the vibration and learn to give the sound correctly. This is only one of the various devices which the earnest teacher will need to use to perfect the quality of special sounds.

CLASS EXERCISES.

(1) Let the teacher stand before the class in such a position that there are only as many fingers to be seen upon her left hand, which she holds before the class, as there are *sounds* to be heard in the set of words that are to form the subject of the lesson.

Example 1. C-ă-t, m-ă-t, r-ă-t, p-ă-t.

(2) Let the teacher then sound slowly any word, as *cat*, and with the right hand touch successively the forefinger, middle finger, and ring finger of the left hand as she gives the several sounds, c-ă-t.

(3) Let the children listen and watch the movements of her hands as she again sounds the word.

(4) Let her repeat the exercise while the children imitate the *sounds* she makes, but not the movements of her hands.

(5) Let the children imitate the *movements* of her hands as she gives the sounds in the word.

(6) Let the children imitate the *sounds* she makes and the *movements* of her hands as well.

These exercises should be continued until the class has had a systematic analysis of words that contain respectively ă, ĕ, ĭ, ŏ, ŭ.

THE TRAINING OF THE EYE.

Now that the *ear* can, to a certain degree, recognize, and the *voice* imitate, simple *sounds*, the *eye* should be trained to read the *signs* or *symbols* of these elementary sounds.

In connection with this work, *forms* rather than *names* should, at the outset, become familiar to the child; hence, care must be taken not to burden his mind with the latter, a knowledge of which will come to him later, as this work branches out into *oral spelling*, which is merely calling the names of the group of letters that make a word.

Script should be used in preference to print, since script is the form of letter the child will find most useful to him in the slate work, which deals so largely with the correct forms of written words.

cat *can*

rat *ran*

mat *man*

fat	fan
pat	pan

(1) Let the teacher point to each letter in the word as she sounds c-ă-t; r-ă-t; m-ă-t; f-ă-t; p-ă-t.

When each word in the lesson has been sounded, and the letters or symbols that form the word designated, let the teacher proceed to find letters of *similar form* and *sound* until the child fully realizes that each *sound* has its own written *form* or *symbol* to represent it.

When the child has grasped this idea, the work is comparatively easy, and a variety of class exercises may be introduced to add to the interest of the lesson.

For instance, one child may be selected to find the symbol of the sound *ă* in as many words as he can; another to find the symbol of the sound *n;* another to find the symbol of the sound *t.*

(2) Let the teacher erase the first letter in each word of the board-lesson until the work stands thus: —

—at	—an
—at	—an
—at	—an
—at	—an
—at	—an

(3) Let her then lead the class to see that the main part of each word in the first column is the same throughout the column, and that the same fact is true of the words in the second column.

(4) Let her pronounce each word in the column and have it repeated.

(5) Let her give slowly the *sound* of any special letter, which she has previously erased, and write its form before the stem of a word. As she restores each word to its original form, let her call upon any child to pronounce the several words as they now appear.

c—at	c—an
r—at	r—an
m—at	m—an
f—at	f—an
p—at	p—an

(6) Let the teacher point to any initial, as *c*, give its sound distinctly and call upon a child to pronounce the *complete word* of which it is the initial.

(7) Let her call upon a child to *find* and *pronounce* any *word* which he can recognize upon the board.

(8) Let her call upon a child to give the *sound* of any *initial* letter which he finds in the corresponding lines of each column.

(9) Let her call upon any child to erase an *initial* letter of which he can give the *sound*.

(10) Let her call upon a child to give the *sound* of any *initial* letter which has been erased; as the sound is given, let her write its *symbol* before the stem of the word.

(11) Let her erase the *middle* letter in each word of a column; when this has been done, let her call upon any child to give the *sound* of the letter which has been erased; let her in each case insert the proper symbol, as the sound is given, until the words again stand complete.

(12) Let her erase the *final* letter in each word of a column; let her call upon any child to give the sound of the erased letter; as the sound is given, let her in each case write its symbol in its proper place.

Similar work must be done with words containing respectively the short vowel sounds, ĕ, ĭ, ŏ, ŭ.

When the *forms* of the letters readily call up the *sounds* characteristic of the letters, systematic sounding of words from the board should form part of the class work of each session.

For this purpose columns of words may be written upon the board, or a word may be written and the class instructed to give words that rhyme with it.

. Each word should be written upon the board, and when the list is complete each word in it should be carefully sounded.

The class should then be encouraged to use the words in sentences, in order that the meaning and use of them may be thoroughly understood.

SCHOOL-ROOM WORK — HOW — WHY.[1]

BY N. A. CALKINS.

V.

HAND-TRAINING IN OBJECT-TEACHING.

THE hand is the human organ *par excellence.* It is an executive officer of the mind. Its development begins in early childhood, and before the child first enters school great progress has been made in the use of the hand. But like other human organs, it needs systematic training to give it accuracy and precision of movement.

As a means of getting knowledge, as well as of expressing it, the hand is underestimated. The more we know concerning the way in which children obtain and retain knowledge, the more we shall appreciate the value of hand-training as an indispensable aid in education. We may learn much concerning an object by the senses of sight, taste, and smell, but we *know more* about an object when we have *felt it*, *handled it*, and *represented it.*

Hand-training develops mental activity, and through the sense of touch it becomes a means of knowledge. It develops dexterity also, and thus becomes a means of applying knowledge in matters of daily life. The other senses gather much of the world's materials of precious knowledge, but the sense of *touch*, through the trained hand, coins and stamps them with the mind's impress into a circulating medium that enriches mankind. The sense of touch, through the trained hand, becomes an enchantress which transforms the grosser elements, accomplishes the seemingly impossible, captivates and adorns that with which it comes in contact. The exquisite skill of the *artist* and the beautiful and useful work of the *artisan* are the results of mental development through hand-training.

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[1] Copyright, 1887, by N. A. Calkins.

The means of developing the sense of touch and the exercises for *hand-training* are intimately related. The union of the two gives us *a knowledge-getting power*, and also a *knowledge-using power: the sense of touch leads in getting knowledge; the trained hand leads in using knowledge.*

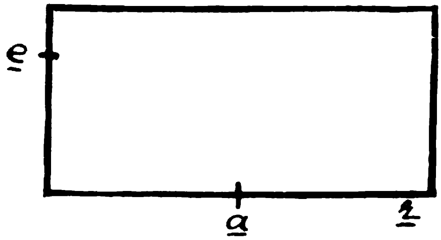
Lessons on *Form*, already given, have been exercises for hand-training as well as for developing the powers of observation. *The paper-folding* exercises, continued here, will extend both the hand and the mental training. Because of these results they are worthy of the careful attention of all teachers who properly consider the true purposes of school education.

NINETEENTH LESSON. — POLYGONS, CONTINUED.

In the last lesson, the eighteenth, instructions were given for folding a *hexagon* from a circular piece of paper. The following directions tell how to fold several polygons — the *pentagon*, *hexagon*, *octagon*, *decagon* — from square pieces of paper.

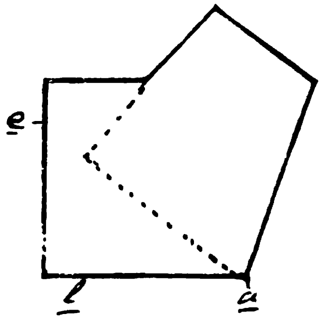
Pentagon. — Cut from paper a square with sides from four to five inches. Fold the square into halves, on its diameter, forming an oblong; then find the *middle* of the folded side and mark it. Also find *one fourth* of the length of the left-hand end of the oblong; measure from the upper corner toward the folded side and mark the point — see the marks — (*a*), middle of folded side; (*e*), one fourth of left end; (*r*), lower right-hand side, — in the following: —

FIG. 1.



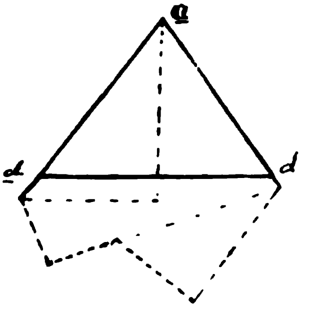
Now fold the lower right-hand *side* (*r*) over toward the upper left-hand *corner* so that its edge will form a line from the middle on the folded side (*a*), toward the mark (*e*), (indicating one fourth of the distance across the end), and crease the fold. The paper will now have the shape indicated by

FIG. 2.



Next turn over the paper and fold the left-hand lower part (*a*), (*l*), (*e*), on the line (*a e*), keeping this fold even with the edge of the previous fold, forming a *triangle just one half* the size of the one made by the right-hand fold, see

FIG. 3.



Now measure from the vertex of the triangular form (*a*), and mark equal distances on each side, near the base (*d d*); then fold on line with these marked distances, to form the base of the acute angle triangle, and press this fold firmly, to distinctly crease the outline of the pentagon *within the square*. On opening this folded paper there will be seen *five equal triangles* so arranged around a center as to form a figure with *five equal sides* and *five obtuse angles — a regular pentagon.*

Let the pupils repeat these foldings several times. By cutting off the part below the base-line, a pentagon will be more distinctly shown.

Hexagon. — Cut a square from paper; fold it in halves, on its diameter; then find the *middle of the folded side* and mark it.

Holding the folded edge up, turn the right-hand upper corner down *toward* you, and the left-hand upper corner down *from* you; then adjust these folds so as to form three equal triangular parts, with the vertex at the middle of the folded side; when all the side-edges are even, crease the folds. Next, mark equal distances from the vertex of the triangular form, on each side, then fold the upper part of the paper across from side to side, on a line with the marked distances, forming an equal-sided triangle; crease this fold firmly, so as to mark distinctly the outline of a *hexagon* within in the square.

On unfolding this paper, if the folds have been correctly made, there will be seen *six equilateral triangles* so arranged around a center as to form a figure with *six equal sides* and *six obtuse angles — a regular hexagon.*

Octagon.—Cut a square from paper; fold it in halves on its *diameter*, forming an oblong; then fold together the ends of the oblong, forming squares; crease the folds firmly. Next, fold the square diagonally, from the corner that represents the middle of the folded side of the oblong; crease this fold firmly. Find the length of the short side with folded edges; measure this length from the folded vertex of the triangle, on its longest side, and mark it. Then fold, on a line from the marked length, so as to form an *acute* angle triangle with *two* equal sides; and crease this fold firmly so as to distinctly mark the outline of an *octagon* within the square.

On unfolding this paper there will be seen *eight equal acute angle triangles*, so arranged around a center as to form a figure with *eight equal sides* and *eight obtuse angles — a regular octagon.*

Decagon.—Cut a square from paper; fold it as directed for making a pentagon; then *fold the pentagon in halves*, on a line with the edge of the small triangle. (See the dotted line extending down from the vertex (*a*) in Fig. 3.) Next fold a base-line so as to form an *acute* angle triangle, with *two equal* sides. Crease the fold for the base-line firmly, so as to represent distinctly the outline of a *decagon* within the square.

On unfolding this paper there will be seen *ten equal acute angle triangles*, so arranged around a center as to form a figure with *ten equal sides* and *ten obtuse angles — a regular decagon.*

Care should be taken to make all the folds correctly, and to crease them thoroughly.

It will be noticed that each of the four polygons has been formed by folding so as to represent the plane form within a square, without cutting the figure. The teacher should show the pupils how each of these forms may be cut out exactly, from their respective triangular figures, by *a single straight cut* on the line of the folded *base.*

Cutting Five-pointed Stars.—As a means of teaching the fact that stars are represented on our national flag with *five points,* take a piece of paper as folded for a *decagon* (before the base-line has been folded), cut from the upper portion of the folded paper an *obtuse* angle triangle, with no two sides equal.

Unfold the piece thus cut off, and, if the folding and the cutting have been properly done, a regularly formed *five-pointed star* will be made.

Teach the pupils how to fold and to cut the paper for making the star, then request them to do it at home.

METHODS OF TEACHING ARITHMETIC IN PRIMARY SCHOOLS.[1]

BY LARKIN DUNTON, LL.D.,

Head Master of the Boston Normal School.

XV.

DIVISION, CONTINUED.

WE will show by an example of the last exercise (exercise eight) what the full treatment of a problem in division should be, as it has been developed in the successive stages of work in division. Division requires a series of conclusions, and in this fact lies the difficulty which it presents to the children. There is no cause for discouragement, however; for if division by 2 is thoroughly mastered, the remaining numbers can be passed over much more rapidly. Do not introduce the children to the formal, written representation of the process till they have attained considerable facility in explaining it. If they need to be occupied with written work, there is material enough in the review of what precedes — especially in addition, subtraction, and multiplication. Probably it will take from four to six weeks to ground a class thoroughly in division of numbers below 100 by 2. Division by the numbers from 3 to 10 will scarcely require more time. The successive steps in the solution of a question in the division of a number by 2 when both the tens and units are odd numbers may be brought out thus: —

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[1] Copyright, 1887, by Larkin Dunton.

(1) *Teacher.* We will find the half of 75. Can we divide 75 immediately; that is, all at once?

Scholar. We cannot divide 75 immediately.

(2) *T.* Why not?

S. Because 75 is not found in the twos of the multiplication table.

(3) *T.* Can we divide 7 tens immediately?

S. We cannot divide 7 tens immediately.

(4) *T.* Why not?

S. Because 7 is not found in the twos of the multiplication table.

(5) *T.* What is the next number below 7 that is found there?

S. Six is the next number.

(6) *T.* What is the half of 6 tens, or 60?

S. Half of 6 tens, or 60, is 3 tens, or 30.

(7) *T.* How many of 75 remain to be divided when we have divided 60?

S. Fifteen remain to be divided.

(8) *T.* Can we divide 15 immediately?

S. We cannot divide 15 immediately.

(9) *T.* Why not?

S. Because 15 is not found in the twos of the multiplication table.

(10) *T.* What is the next number below 15 that is found there?

S. Fourteen is the next number.

(11) *T.* What is half of 14?

S. Half of 14 is 7.

(12) *T.* How many still remain to be divided?

S. One still remains to be divided.

(13) *T.* What is half of 1?

S. One half is half of 1.

(14) *T.* How many did we at first obtain, when we divided 60?
S. We at first obtained 30.
(15) *T.* Then how many?
S. Then 7.
(16) *T.* Then?
S. One half.
(17) *T.* Add them all together.
S. 30+7+½=37½.
(18) *T.* Give the entire solution.
S. What is half of 75?

Half of 60= 30.
Half of 14= 7.
Half of 1= ½.
Half of 75=37½.

This example will be sufficient to show how complicated is the process of division, and how very nicely the work should be graded, so as to lead the pupils to ask and answer by themselves all the necessary questions. At first the teacher asks the questions; but soon the brighter pupils may act as teachers. They may take their places in turn before the class, and question their fellow-pupils. This must be continued till all, even the dull ones, are able to do the same. The brightest children may be set to questioning single rows or small divisions. Gradually the pupils will begin to unite the several successive processes; at first two, and finally all. It is the same here as in other complex mental processes: at first we perform the successive steps consciously; and then, as they are repeated, we seem to omit more or less of the intervening steps and to reach the conclusion at once. To make this result possible, however, it is absolutely necessary that each step be not only expressed but understood. Hence the importance of thorough illustration and also of well-graded and abundant practice.

When the pupil has been through all the work in division of numbers by 2 which has now been pointed out, so that he is prepared independently to arrange the conclusions in order, he may be put at written work. The form of this may be the following: —

½ of 75.	2 in 75.
½ of 60= 30.	2 in 60= 30 times.
½ of 14= 7.	2 in 14= 7 times.
½ of 1= ½.	2 in 1= ½ times.
½ of 75=37½.	2 in 75=37½ times.

Such work as this is the best preparation for the division of larger numbers; but then the written form must be the result of a thorough comprehension. It is of importance that every figure stands in its proper place. For this purpose it is well to divide the slates into little rectangles, and to have one figure put in each. The written solution of a problem should be a picture of order. The orderly arrangement of the work makes it possible to dispense with many words; it tends to mathematical brevity and definiteness; and it materially lightens the teacher's work of correction.

If the division of small numbers is to be a preparation for the division of larger numbers, the forms which represent the two processes should agree. The arrangement of the written work, in case of large numbers, is the following: —

$$\begin{array}{l}2)75(37\frac{1}{2}\\ \quad\underline{6}\\ \quad 15\\ \quad\underline{14}\\ \quad\ \ 1\end{array}$$

The separation of the dividend into parts, in the form given above, is sufficiently like this to give no trouble in later work; but any other separation — as into 70, 4, and 1, or into 72, 2, and 1, because the children happen to know the half of these numbers — would be wrong practice, because it would not be a preparation for higher work; for in the division of large numbers the result is to be reached figure by figure, and hence the same should be true in the division of small numbers. The experienced arithmetician, especially when his work is wholly mental, is bound by no rules. He often reaches the result by a short cut. But it is never to be lost sight of that it is the business of this stage of the work to develop the power of arithmetical calculation. It will be time enough later to teach shorthand processes.

Then, too, the importance of performing the work at one stage in such a way as to prepare the pupils for subsequent stages is too often overlooked. It is much easier to make children comprehend the processes of division, as they stand related to one another, when dealing with numbers completely within their comprehension than in the treatment of incomprehensible numbers; hence the importance of slow and well-graded progress in division of small numbers by 2.

The young teacher should not be impatient if much time is spent with the number 2; for if the fundamental conceptions of division are here made clear, subsequent progress will not only be more rapid, but much freer from that confusion which results from an attempt to teach a new principle in connection with indistinctly formed ideas.

THE HISTORY OF OUR COUNTRY: HOW TO TEACH IT.[1]

BY WILLIAM A. MOWRY.

V.

PATRICK HENRY.

WE have learned from our study of the Revolution that the contest with Great Britain was not brought about by a few political leaders ambitious for place and power, but was rather the uprising of a whole people in opposition to the Mother Country, and at first without intending independence. Yet there were leaders — men of great minds, well versed in political history, who voiced the sentiment of the public at large. Beginning with the passage of the stamp act and covering a period of the next ten or twelve years, who were the most conspicuous leaders? Thomas, you may name one."

"James Otis, of Massachusetts."

"William, another."

"Patrick Henry, of Virginia."

"James."

"Samuel Adams, of Massachusetts."

"Ruth."

"Benjamin Franklin, of Pennsylvania."

"Mary."

"George Washington, of Virginia."

"Ezra."

"Alexander Hamilton, of New York."

"Emma."

"John Hancock, of Massachusetts."

"Thacher."

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[1] Copyright, 1888, by William A. Mowry.

"John Adams, of Massachusetts."

"Annie."

"Henry Laurens, of South Carolina."

"Waverley."

"Peyton Randolph, of Virginia."

"Very well; you have given a list of names of remarkable men — men of great power, who exerted a tremendous influence in molding the thought of the times. Shall we consider, to-morrow, for our lesson, one of these men, and, if so, which one?"

Thomas: "I nominate James Otis."

William: "I nominate Patrick Henry."

James: "I nominate Samuel Adams."

"Well, we will confine our votes to these three candidates. Warren and Winifred may act as tellers."

Warren: "Whole number of votes, 19, of which Patrick Henry has 10, James Otis, 7, Samuel Adams, 2."

"To-morrow you can give us what information you can concerning the life and character of Patrick Henry. William, you may write out ten facts about the youth of Patrick Henry. Thomas may select five facts of importance regarding his middle life. Ruth may mention the most important events in his life after the Declaration of Independence. Winifred may sum up his character, naming his most striking qualities and peculiarities. You may write the results of your investigation upon the blackboard at the opening of school to-morrow morning; and then at our recitation, at 12.30, all the members of the class will be prepared to discuss the various branches of the subject. I will also ask Warren to tell us what he can of the defects he finds in Henry's character and life. At the close of our recitation we will have a reading and a declamation. Emily may read the traditional description of Henry's famous speech before the Virginia convention in the old church at Richmond, which is given in Tyler's Life of Patrick Henry, on pages 129–132, and as Wesley has already learned the speech, he may declaim it, using the version found in Tyler's Life, beginning near the foot of page 123.

(The next morning when the school came together, they found the following on the blackboard.)

A FEW FACTS CONCERNING THE YOUTH OF PATRICK HENRY.

1. He was born May 29, 1736.

2. He went to a small neighborhood school till he was ten years of age.

3. His father then took personal charge of his education, aided by the Rev. Patrick Henry, the boy's uncle.

4. He studied Latin and became much interested in Roman history. This drill in the Latin language was the foundation of that literary culture which gave him his great success in after years.

5. He made it a rule to read Livy through "once, at least, every year during the early part of his life."

6. "He had the habit of reading over and over again a few of the best books." His motto was *multum non multa.*

7. When fifteen years of age he entered a country store, and at sixteen his father set him up in trade.

8. At eighteen he was bankrupt and retired from trade to a farm.

9. At twenty he again became a merchant and at twenty-three was again insolvent.

10. At twenty-four he was admitted to the bar and began the practice of law.

FACTS REGARDING PATRICK HENRY'S MIDDLE LIFE.

1. During the first three years of his law practice he charged fees in 1,185 cases.

2. Three years after his admission to the bar he tried his first great case, "The Parsons' Cause," which gave him great popularity through Virginia.

3. His first great political speech was in the House of Burgesses at Williamsburg in 1765, when he was twenty-nine years of age.

This was on the occasion of his moving a series of resolutions concerning the famous stamp act. In this speech occurred the well-known passage: "Cæsar had his Brutus, Charles the First his Cromwell, and George the Third" — "Treason, Sir!" exclaimed the Speaker; to which Mr. Henry instantly replied — "and George the Third may profit by their example."

4. On the 23d of March, 1775, in the Virginia convention at Richmond, Henry moved the adoption of a series of resolutions for arming and disciplining the militia of the country, and in support of these resolutions made that great speech which pre-

cipitated the Revolution and which stamped him as the greatest orator of the country.

5. "The first overt act of war in Virginia was committed by Patrick Henry." Only a few days subsequent to the battle of Lexington, Governor Dunmore having removed the gunpowder from the public storehouse and placed it on board an English vessel in the James River, Captain Henry marched his militia company toward Williamsburg with the intention of compelling the return of the gunpowder, or payment for the same by the governor. Lord Dunmore prudently sent Richard Cobden, who paid Henry £330, thereby averting a collision.

THE MOST IMPORTANT EVENTS IN THE LIFE OF PATRICK HENRY AFTER THE DECLARATION OF INDEPENDENCE.

1. On July 5, 1776, Patrick Henry took the oath of office and became the governor of Virginia, which office he retained three years.

2. He became governor of Virginia again in 1784, and retained the office two years.

3. The Virginia state convention to consider the new United States Constitution met in Richmond June 2, 1788, and on the 25th voted to adopt the Constitution. Mr. Henry opposed its adoption with all his eloquence and fiery zeal.

4. During the next six years Mr. Henry distinguished himself at the bar, winning laurels as a good lawyer and famous orator.

5. In 1794, being fifty-eight years of age and having a competent fortune, he withdrew from his profession and spent his remaining years in quiet retirement, refusing many high offices. He died on the sixth of June, 1799, being sixty-three years of age.

THE MOST STRIKING QUALITIES AND PECULIARITIES OF MR. HENRY'S CHARACTER.

1. First of all, he was a great orator.

2. He was honest, conscientious, and fearless in maintaining his opinions.

3. He was a pioneer, impulsive, zealous, and radical.

4. He was always on the side of law and order, good morals and religion.

5. He was a good husband, father, citizen, and patriot.

THE PRINCIPAL DEFECTS OF MR. HENRY'S LIFE AND CHARACTER.

1. He was rash and impulsive.
2. He was illogical.
3. He was a vigorous advocate of state sovereignty.
4. Hence his opposition to the federal constitution.
5. Hence his absolute refusal to hold office under the Constitution.

[The discussion of these several blackboard exercises would form the subject of the next lesson, and would be carried out differently by different schools, depending upon the age, ability, and sagacity of the class. No further hints or suggestions seem needed for an intelligent teacher.]

DRAWING IN PRIMARY AND GRAMMAR SCHOOLS.[1]

BY WALTER S. PERRY,

Director of Art Department, Pratt Institute, Brooklyn, N. Y.

VIII.

APPEARANCE OF FORM-OBJECTS TURNED AT AN ANGLE.

FOR this exercise every pupil should make a cube four inches square, out of smooth, stiff paper. If the pupils see for themselves that the horizontal edges appear to slope and to converge, it will be worth a great deal, both to them and to the teacher, in all subsequent work; therefore it becomes quite necessary that each pupil should possess a cube. Moreover, it is excellent practice for the pupil to learn to make a geometric object nicely. In addition to the cube the pupils should fold some rather stiff paper to make two strips about ¾ of an inch wide and 5 inches long. For preliminary practice (*a*) hold the strips in one hand so that one strip can be kept vertical, and the other easily moved up or down like the handle of a pump. (*b*) Close one eye and hold the strips at arm's length, so that the inner point of intersection will be exactly between the eye and some point in the front part of the room which the teacher may designate. Two lines crossing each other might be made upon the blackboard and the strips so held as to cover them. (*c*) Place the cube as far back on the desk as possible, so that the left face will be turned away as much as the right face. The cube must be placed so as to be level. (*d*) Hold the strips so that the inner point of intersection will be between the eye and the nearest upper corner of the model, and so that the edge of the vertical strip will cover the nearest vertical edge, and then move the other strip up or down until it inclines as much as the horizontal edge of the object appears to incline. The strips must be kept parallel with the plane of the observer's face. Study the other receding edges in the same way. (*e*) Study retreating horizontal edges above and below the eye, the edges of a door open and closed, the horizontal edges of pictures on the wall, books, boxes, tables, etc., all turned at an angle. Note that all horizontal edges above or below the eye, which also retreat from the eye, appear to slant—those above the eye appearing to slant downward, and those below the eye appearing to slant upward, while those on a level with the eye appear horizontal (Fig. 3.)

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[1] Copyright, 1887, by Walter S. Perry.

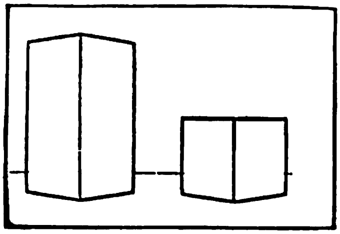

FIG. 1.

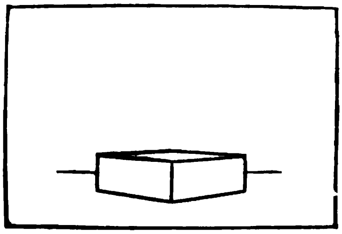

FIG. 2.

Figs. 1 and 2 show the use of the pencil in discovering the direction of receding edges, and another application of the use of the strips of paper with the square prism as a model. The pupils should have much practice in studying the apparent inclination of horizontal edges retreating from the eye, remembering to hold the papers always parallel to the plane of the face and to keep one eye closed. When the edges are on the left, hold the papers in the right hand, with the horizontal piece on the left side, and when on the right, hold the papers in the left hand, with the horizontal piece on the right side.

DRAWING.—CUBE BELOW THE LEVEL OF THE EYE.

To make a pleasing drawing the cube should be placed farther away than the pupil's own desk. If every other pupil sits on the left side of his seat, and the others on the right, the cubes of each can be placed on the desk next in front. Indicate the general height and width of the drawing and then (1) draw the nearest vertical edge; (2) locate a line to represent the level of the eye by determining about how many times the height of the object the eye is above it, and place a line or ruler the same proportional distance above the drawing; (3) determine the apparent slope of the nearer upper edges of the left and right faces and draw lines considerably longer than will be required for the cube when finished; if the left side of the cube is turned away just as much as the right side, the slant will be the same; the more one face is turned the more the edge of that face will appear to slope; (4) if the paper is large enough determine where the lines just found will cross the line at the level of the eye; if the paper is too small determine as nearly as possible where these points will be on the desk; these points are sometimes called vanishing points (v. p. 1 and v. p. 2); (5) draw the lines of the nearer lower edges to their respective vanishing points;[2] (6) determine the apparent width of the left and right faces as compared with the nearest vertical edge;[3] (7) complete the exercise by drawing lines for the farther upper edges to their respective vanishing points.

It is a good plan for the pupils to make first two very small drawings, so that the vanishing points can be found on the paper, one with the faces turned equally, at 45 degrees (Fig. 4), and one with the faces turned unequally away from the spectator (Fig. 5). This done, drawings should be made on a larger scale, the vanishing points being found, perhaps, beyond the desk (Figs. 6 and 7). The drawing should be held frequently in an upright position, otherwise the pupil cannot tell whether the lines converge properly.

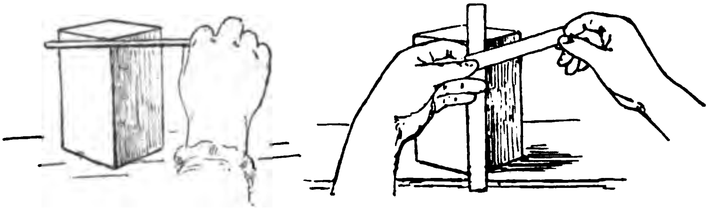

FIG. 3.

Fig. 3 illustrates the appearance of retreating horizontal edges above, below, and on a level with the eye. The three objects are supposed to be so placed that the top of the cube is exactly on a level with the eye. The upper edges of the square prism, therefore, appear to incline downward and the lower edges upward. The upper edges of the cube are on a level with the eye and appear horizontal. The square plinth is wholly below the level of the eye, and all the horizontal edges incline upward.

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[2] In the previous paper it was proven by the use of strings that all parallel horizontal lines retreating from the eye appear to converge and if produced will meet on the level of the eye.

[3] See article and illustration in March number.

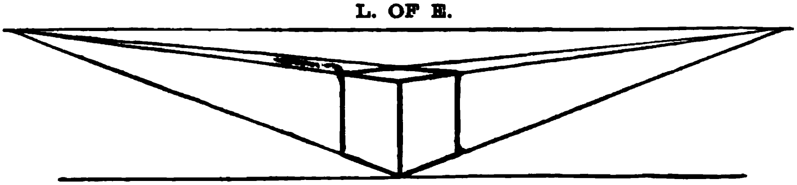

FIG. 4.

Fig. 4 illustrates the appearance of a cube below the level of the eye, turned at an angle of 45 degrees. The drawing being made on a small scale, the vanishing points are easily determined.

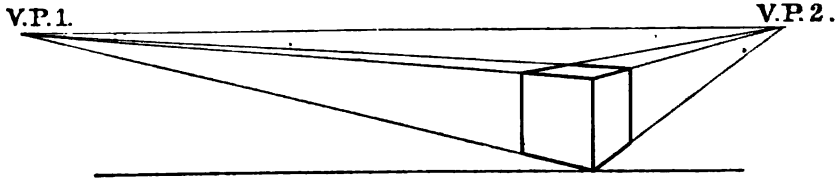

FIG. 5.

Fig. 5 gives the appearance of the cube when the right face is turned more than the left face.

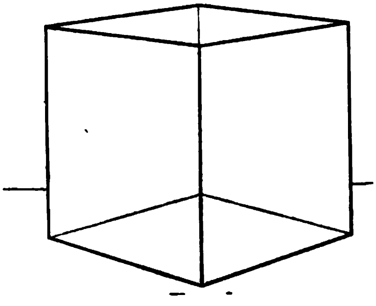

FIG. 6.

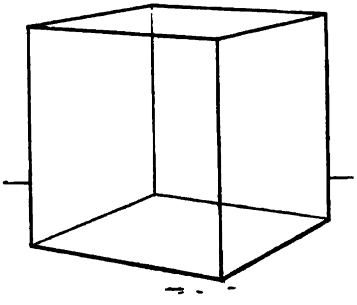

FIG. 7.

Figs. 6 and 7 illustrate the cubes of Figs. 4 and 5 drawn on a larger scale, with the vanishing points beyond the margin of the paper. By continuing the lines beyond the drawing it will be seen that they converge. The further table-line is also seen in each of these drawings.

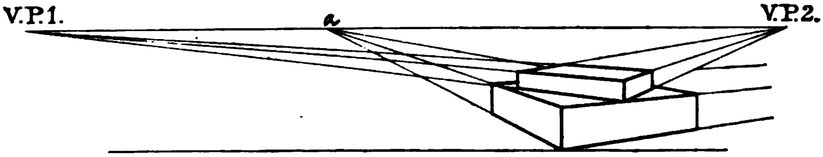

FIG. 8.

Fig. 8 shows the converging lines and vanishing points of two objects when so placed that the edges of the two books are not parallel.

SUMMARY. — APPEARANCE OF FORM.

1. A circle viewed obliquely will appear as a perfect ellipse.

2. Lines which are vertical in the object must be represented vertical, and consequently parallel.

3. Lines which are horizontal in the object and parallel with the plane of the face must be represented as parallel and horizontal.

4. All parallel horizontal lines in the object which retreat from the eye appear to converge, and if sufficiently prolonged will meet in a common point *on a line at the level of the eye.* Hence, horizontal lines in an object which are above the level of the eye, and which retreat from the eye, appear to point downwards, and those below the level of the eye appear to point upwards.

5. Two equal lines running in the same direction, but at unequal distances from the eye, appear unequal in proportion to the difference in their distances from the eye. The more distant appears the shorter, and should be so drawn.

LIFE surprises and overpowers us with the knowledge which it offers; the book, impassive, waits our convenience; the teacher, superior to us, perfectly prepared in comparison with us, consults our necessity, and with his living speech uses a gentle force to which we can yield without losing our freedom. ROSENKRANZ.

METHODS IN GEOGRAPHY.[1]

BY LARKIN DUNTON, LL.D., AND MISS L. T. MOSES.

IX.

NATURE LESSONS.

First Year's Work.

THE lessons on rain and snow, and mist and fog, do not give so frequent opportunities for observation as the preceding lessons, and so should be deferred till after the study of the subjects previously treated. The points to be observed in the lessons on the snow are the flakes, with their color, form, size, and movement; the snow on the ground, with its color, surface, and depth; and what becomes of the snow when the weather grows warm. The things to be thought about in the lessons are what things the snow is like — both the flakes in the air, because of their form and movement, and the snow on the ground, because it keeps the grass and flowers warm. The children should also think of the various uses of the snow to persons, to animals, and to plants.

In observing the movement of the snow, the various directions and the varying rapidity should be noticed. In this connection the windows should be opened long enough for the children to listen and know the perfectly noiseless fall of the flakes. The children will like to imagine their little fingers to be beautiful white snow-flakes, and let them fall on their desks as silently as snow-flakes would. The beautiful whiteness of the snow suggests the necessity of having the fingers perfectly clean before they can be thought of as snow-flakes; and the children enjoy playing their fingers are snow-flakes so well that they determine to have their fingers as clean, if not as white, as the snow-flakes.

After the children have told for what things they are going to watch the snow, the teacher tells them there is one thing more, which is a secret that the snow-flakes will tell to any child who looks at them carefully enough. It is presumed that the children,

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[1] Copyright, 1887, by Larkin Dunton and L. T. Moses.

even if they have said the flakes were like stars, have not yet discovered the general hexagonal plan on which most snow-flakes are formed; but they can easily see and count the points to the stars, as they like to call the flakes, and so discover their secret.

Many poems may be found appropriate to read at the close of the lessons on snow that will give pleasure to the little ones. The following stanzas have been found to delight them: —

THE SONG OF THE SNOW-FLAKES.

Falling, falling, gently falling,
All the day and night,
Making for the pretty flowers
Blankets warm and white.

Shining, shining, brightly shining,
In the morning light,
Decking every tree with jewels,
Precious, pure, and bright.

Running, running, swiftly running,
When the warm winds blow,
Over fields of grass and flowers
In pure streams we flow.

Praising, praising, ever praising
The dear God above,
In our coming, work, and beauty,
Showing you his love.

The children enjoy this more if they are allowed to illustrate it by motions, when they are appropriate.

In lessons on the rain the children should see the size, form, and movement of the drops; should hear their patter, and tell what sounds it is like; should illustrate the sound the falling rain makes, and compare it with the softly falling snow. They should notice the dull gray sky and the heavy clouds moving across it. The rain on the ground, the little streams that are formed by it, and the part that soaks into the ground, giving drink to the roots of plants, should also be observed. This observation will help to show the children the necessity of the rain to themselves, the animals, and plants, and will thus prepare them for all the lessons in children's literature that turn upon the work of a drop of rain, thus inciting children to do their little work simply and well. It is hoped that the interest the pupils take in watching the different rain-storms, to see the various sizes and directions of the drops, the varying length of the rain, and the amount of the fall, will help them to fret less at the interruption of outdoor play, so that their pleasures will be increased and their annoyances diminished.

The mist and fog are of rather infrequent occurrence; but they should be observed when the opportunity offers. The thickness should be measured by the distance at which objects can be seen; the moisture demonstrated by placing a dry cloth out-of-doors and letting it remain till it is wet; and the height should be seen, if the school building is high enough for the pupils to see over it. The lesson should be resumed when the mist or fog breaks away, that the children may see the gradual dispelling of the moisture by the heat of the sun. If the children live in the country, they will like to watch the mist as it forms over the streams and ponds, the hollows and marshy places. They will enjoy, too, the stories and legends of the mist. If the school is at the seashore, the children will be interested to watch the fog as it moves in from the sea, and the bank that it forms as it moves out over the sea. In a little time they will learn to know a fog-bank over the water, and will like to begin to predict the fog before it comes. The use of mist and fog to the thirsty flowers they will readily discover.

This will finish the course of lessons on the phenomena of the air. The remaining lessons on nature for this year are the lessons on the land and water. These lessons, though they offer less variety in their aspects than those on the air, are not less valuable and interesting. The lessons on the land would naturally precede those on the water. The following order of subjects is a good one: The rocks and soil, the surface of the land, and the outline or shore forms of land.

In the lessons on the rocks and soil the children should each have a box containing specimens of the different rocks and soils common to the immediate neighborhood. The children look at the different objects, and name each, and tell where they come from. The teacher names the objects rocks and soil, and the children see clearly this broad classification. The children then decide which of the various soils they would like best for a flower-garden, and that soil is called loam; then the clay and the sand are named. Some of the differences in the soils are now found, as, the varying color, the degrees of ease in crumbling. The rocks are examined in the same way, and the differences in color noted and described.

The different degrees of hardness may perhaps be found by the children, if they are allowed to rub the rocks together. The names of very common rocks — such as slate, sandstone, and granite — may be given.

The children are now directed to think whether there is more rock or soil to be seen on the earth, and are asked to verify their decision as they go home. They are also told to determine whether there are any places where they can see how deep the soil is, and what is under the soil. The teacher thinks she has seen soil of a different color and coarser than any they have on their desks, and tells them just where to look for this soil as they go home, and asks them to see if they can tell whether this soil is loam, clay, or sand. The children are also asked to notice everything that grows in the soil; and after all this observation has been made they can think of the great use the soil is to all the animals and to people. It is well to continue this observation till the children become enough interested to notice all these things in the soil and rocks, as this observation will be valuable in their subsequent work.

The first thing to be noticed in the lessons on the surface of the land is its general unevenness. Then the hills are to be studied. The first thing the children will observe will be the height, and that it varies in different hills. The fact that the slopes are not alike, but that one is steeper than others, will be easily brought to the children's notice from their experience in coasting, where there is snow. In connection with this study the top, bottom, and slopes are named. The fact that rocks more frequently crop out on hillsides should be observed, and that less luxurious vegetation appears where the soil is thin. The use for grazing and for raising timber may be told from the observations of the children; and they may be helped to see that the hills are beautiful, both from the variety they give the landscape and from the beauty of their green slopes.

The land between the hills, or in the valleys, will next claim the attention of the children. The fertility of these low places may be observed, and the fact that the farmer uses them for his best crops may be stated. The children will find the lowest part, and observe the brook or other water there, and will be shown, after the next heavy rain, that the water flows from the hills down into the valleys. The beauty of the luxuriant vegetation, of the streams and ponds, of the contrasting high and low land, and the use that man makes of the valleys for homes, as shown by the farms and villages, should all be observed and stated.

A large tract of low, level land will give the elementary idea of those vast plains which enrich the earth. The only things to be observed are the generally level surface and the vegetation. The children can compare the general barrenness of hills with the luxurious vegetation of valleys.

The lessons on the outline forms of land should be very simple this year. The pupils are to observe the shore line of any body of water which they can see, and notice its irregularities. They will observe that in places the land seems to go out into the water, in some places very far out, so far that the water comes almost round a piece of land, and in other places only a little way out, making a point of land. The varying height of the shore above the surface of the water will be noticed. The fertility of the low shores and the barrenness of the rocky points will be seen. The islands off the coast are to be observed here and the difference between them and the other coast forms of land, in that the water comes all round them.

This will be sufficient for the study of land forms the first year. The study of the water forms will finish the work on nature for this year.

LANGUAGE LESSONS AND EXERCISES.[1]

BY L. W. RUSSELL, A.M.

XI.

CONJUNCTIONS.

THE proper use of the various words generally classed as *conjunctions* is a refinement in language, which, to most people, comes only by critical observation and careful practice. It is not children alone who use ***and's***, ***and then's***, ***and so's***, ***and says I's***, and other like forms, to such an extent as to make the proper sequence of their discourse doubtful and its meaning obscure.

While an excessive use of connectives entangles ideas and thoughts which should stand independent in construction, the

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[1] Copyright, 1887, by Eastern Educational Bureau.

undue omission of them weakens the grammatical structure of speech and renders the style disagreeably abrupt. Here, then, are two faults to be avoided.

Again, the variations in the primary significance of the various conjunctions, taken singly or in pairs, is a matter of such slight attention, with many people, that grave errors are the consequence.

Children need much aid and frequent correction in this matter. This should begin, too, with their earliest attempts at continuous speech. In class language work, the pupils' use of conjunctions should be carefully watched during their entire course. More depends upon corrections and help, here and there, in oral as well as written language, than upon what is gained by the formal lessons and exercises given at a certain point in language study. A considerable part of the teacher's work in this matter will be to separate long, loosely connected utterances into short, well-defined sentences; also, to bring together, by the use of proper connectives, expressions which may be separated or wrongly connected.

Teaching. — Teach the nature of conjunctions, chiefly by giving easily understood examples of their use. Call attention to the fact that we often wish to say things which belong together, and that we want words to unite them; as, She recited well — was commended by her teacher. She recited well *and* was commended by her teacher. Two boys perform an act together; show that a word is needed to unite their names in speaking of them; as, Thomas — Henry went to the pond, etc.; Thomas *and* Henry went, etc. When the use of *and* is well impressed, take other frequently used conjunctions and show their necessity. Introducing one at a time, show, in the illustrations, the *significance* of each in addition to its *connecting* power. Thus: the *opposition* indicated by *but;* the *choice* or *alternation* indicated by *or;* the idea of *origin* or *cause* shown by *because;* the idea of time in *while* and in *when*, and so on with the most common connectives.

EXERCISES.

1. Find the conjunctions *and* and *but* on a page of your reading book and tell what they connect. Do the same for *if*, *though*, *although*, *unless*, and *because*.

2. Connect the following pairs of sentences, each by a different connective, selecting from the list appended.

The day dawned — the party set sail.
We cannot learn our lessons — we are diligent.
The vessel arrived — my brother did not come.
I have studied my lesson — I cannot understand it.
Strive for education — you are young.
Speak the truth — it may cause you pain to do it.
I know a place — violets grow plentifully.
I shall keep the book — it was my mother's gift.
Heed the advice of your parents — teachers — you go astray — perish.

List: And, yet, but, although, where, unless, while, lest, because.

3. Use each of the following conjunctions for connecting words or sentences:—

and
but
or
if
nor
lest
unless
though
although
that
while
when
where
since
because

NOTE.—As the sentences are read and examined, attention should be directed to the peculiarity of each conjunction. A knowledge of this will form the basis of the division into "coordinate" and "subordinate" conjunctions, which can be made when the pupils clearly recognize the distinctive nature of the classes.

It is important for the pupil to recognize the influence of each "subordinate" conjunction over the statement which it introduces; as, *when* converting the statement into a modifier of time; *where,* into one of place; *unless,* into one of conditions; *because,* into one of reason; and so on.

4. It often takes two or more words separated by other words, to perform the connecting office; use the following list for exercises:

As — so; *As* the mother is, *so* will the daughter be.
So — as; Mary is not *so* studious *as* Sarah is.
Both — and; The sun shines on *both* the just *and* the unjust.
Though — yet; *Though* the flowers bloom, *yet* some people see them not.
Such — that; My engagements are *such that* I cannot meet you.
Either — or; I will *either* come myself *or* send a messenger.

If — then; *If* you will take the boat, *then* I will meet you at the wharf.

So — that; He played *so* long *that* he was late at school.

Neither — nor; *Neither* James *nor* Henry has been here to-day.

Whether — or; I do not care *whether* you send it by mail *or* express.

Because — therefore; *Because* I wanted help, *therefore* was I cast away.

Not only — but also; She was *not only* proud, *but also* very ignorant.

Each pupil write sentences similar to those given.

Each pupil write a sentence leaving blanks where conjunctions should occur, other pupils filling the same.

5. Two or three words, *taken together*, are sometimes used as conjunctions. Use the following as conjunctions in written sentences:—

As though; and yet; but that (never "*but what*"); *as if; as well as; as soon as.*

EXAMPLES.

He recites *as though* he understood it.

Blessings come to us every day, *and yet* we are not thankful.

There is no doubt *but that* he will return.

We should act the truth *as well as* speak it.

I will return *as soon as* I hear from you.

6. Write a sentence containing *nor* with a conjunction proper to use with it; one containing *or* with a proper "correlative"; also one for *either*, *whether*, and *as*.

Continue such exercises until the use of the "correlatives" is familiar.

7. Use in a sentence a conjunction which signifies that things should be taken together (*and*); one which shows that things are to be taken separately or alternately (*or*); change or opposition (*but*); fear or caution (*lest*); to limit time (*till or until*); continuance (*while*); condition (*if*); one connected with *more*, indicating a comparison (*than*).

Notice the usefulness of "than," as in connecting the following:

"Henry has many correspondents; he cannot attend to them all."

Connected. — Henry has more correspondents *than* he can attend to.

7. Take paragraphs from reading books, select the conjunctions found in them and tell why each should be used rather than some other one.

EXAMPLE.

"Eat slowly *and* thoroughly chew your food. Our teeth were made to chew our food *and* the saliva to moisten it, *and* help along digestion. *If* the food is well chewed, the saliva *and* gastric juice act more readily. It is *not only* bad manners to eat rapidly, *but* it is a violation of the simplest law of digestion."

And shows that "slowly" and "thoroughly" express ideas to be taken together, applying equally to one act expressed by "eat." No other conjunction would do this.

If points to the condition under which the saliva and gastric juice act more readily. No other conjunction would do as well. So on for other conjunctions.

NOTE. — No distinction has been made in the preceding exercises between "conjunctions" and "conjunctive adverbs." This may be done if teachers desire to do so.

Rewrite the following boy's story about "Going Fishing," dividing the same into proper sentences, using only such conjunctions as are necessary and appropriate: —

GOING FISHING.

Johnny and I thought we would go fishing and so we dug some worms and then went and bought some hooks and lines and then we went to the woods and cut some fish-poles and then Johnny went home and filled his fish-basket with doughnuts and apples and I got a bag of cookies and so we started off upon the jump for the pond and when we got there we saw an old man down by the shore and so we asked him where the good fishing was and he told us over by the big rock and so we went over to the big rock and then we began to fish. Pretty soon I had a big bite and then my feet flew out and so I went into the water splash and it was over my head and then ——

After remodeling the above, finish the story according to your imagination, studying particularly the use and the misuse of *conjunctions.*

EDITORIAL.

DO your pupils declaim? If so, do they do it well? They do not, you say, because they are not interested and vote the exercise a bore. Well, try this plan: Insist upon your pupils learning selections of prose and poetry from standard authors only. Teach them the grand speeches of American statesmen — Webster, Clay, Patrick Henry, and others. Short selections and many of them are infinitely more interesting than a few long ones. Your scholars are unlike most, if they do not feel stirred by the ring of the speeches, and grasp something — who can tell how much? — of the noble and patriotic spirit in the words. In this country at this time there is nothing more important for our children to learn than true patriotism. Give one who likes poetry with a swing The Battle of Ivry or Ye Mariners of England, and, to balance the scale, give another one of Longfellow's sweetest poems, The Legend Beautiful, The Bridge, or The Singers; only beware of lengthy selections. After a few trials, see if your pupils do not enter into the spirit of the thing and vie with each other to find the best pieces and recite them well. Then you will have gained two points: first, you have taught them to declaim; and second, you have created a taste for truly good prose and poetry.

ONE of the most vital questions at the present time is whether this country is strong enough to assimilate all the foreign elements which are constantly being poured in upon it, and to make them distinctively American. The answer to this must lie, in a great measure, in the work done in our schools to make the little foreigners into true and loyal Americans. Teachers should in every possible way present our country in its true light to the children, that they may see how great and grand it is, and feel honored in belonging to it. We are, indeed, many in one, and it is only as we remember to keep our country "one," and not "many," that it will grow in strength and beauty. Celebrate Washington's Birthday, Inauguration Day, Memorial Day, and relate the great deeds of the noble men who have made the country what it is. Use speeches, poems, essays, pictures, anything you can procure, and always aim at firing the heart and imagination, quickening the pulse, and making the children feel that this country, with its noble record and great future, belongs to them; always remembering that the impressions received in early youth are far more lasting and stronger than any later ones can be.

DRILL in the school-room is essential to all thorough work, and useful appliances only strengthen the benefit derived from drill. The practical teacher, the enthusiastic teacher, is the successful teacher, and where he is to be found are always to be found those school appliances either of home construction or foreign make, which illustrate the subject, interest the pupil, and vitalize the theme. Good methods, well carried out, are a necessity in all first-class work, but teachers should remember to supplement all methods by most thorough and persevering drill.

THE teacher who wishes to work must never scold, pay no attention to the bad, turn all his attention to the good.

No matter what our likings or prejudices may be, we must move on with the spirit of the times or be thrown out of the race altogether.

There is no time for experiments, every step should count and lead to the end.

SOME of us must be content to build piers, those unsightly structures over which a more fortunate age will throw its bridges; but there is some comfort in the thought that posterity will appreciate the patience with which we labored while placing stone upon stone, when threatened by destruction and challenged by the flood.

HAPPY HOURS.

ARRANGED BY MRS. CAROLINE S. MORGAN.

A SPRING RACE.

(RECITATION.)

IT began and ended with just one boy,
Christopher Black was he,
Alert and handsome and straight and tall,
Just the boy for a race or a game of ball,
And merry as merry could be.

Christopher Black had a cousin Chris,
Christopher White was he,
Lazy and freckled, round-shouldered and short,
Just the boy in "prisoner's base" to get caught,
And as happy as happy could be.

Half a mile to the south from the court-house steps,
Chose the Blacks for their cottage's site;
Half a mile to the north was another wee house,
Just a mile between, less the width of a mouse.
And there lived Christopher White.

One morning in spring, young Christopher Black
Set off at a break-neck speed;
In two minutes he passed the squire's front gate.
"What now ?" said the squire. "I say—just wait!"
But Christopher did not heed.

"Been stealin' something," said old Squire Ben,
With a wag of his grizzly head;
"Do tell!" said the man with the butcher's steaks;
"Thief! thief!" cried the boy with the baker's cakes;
And away up the road they sped.

Four minutes brought Chris to the court-house green.
"What 's to pay?" asked lawyers three;
"Who 's sick?" said the doctor; "Who 's killed?" said the judge;
"What 's a-fire?" said the candlestick-maker, Fudge;
And off rushed the six to see.

Still on, like an arrow, shot Christopher Black,
Nor glanced at his following throng:

Little boys, big boys, women and men,
And back of them all puffed old Squire Ben,
  For the road was hilly and long.

At last the boy stopped. "What 's up?" echoed he;
  "Why, it 's April First," with a grin,
"And I thought I would give Cousin Chris a call,
And 't was quicker to run than walk — that 's all!"
  And softly the door shut him in.

— *S. C.*

THE DOGS' MEETING.

(FOR TWELVE LITTLE BOYS.)

(*1st boy.*) The dogs held a meeting
  One day at Somewhere,
At which a Saint Bernard,
  So grave, took the chair.

(*2d boy.*) Then up spoke the Pointer:
  "I roam o'er the hill
To search for the wild birds
  That sportsmen will kill."

(*3d boy.*) Then answered the Setter:
  "I do much the same,
And plunge in the water
  To follow the game."

(*4th boy.*) And next spoke the Stag-hound:
  "I chase the swift deer,
As onward he dashes,
  In madness and fear."

(*5th boy.*) Then up spoke a Terrier —
  From England came he:
"A rat-hunt or cat-hunt
  Is great fun to me."

(*6th boy.*) "Just so," said another,
  A native of Skye;
"To rats, cats, or rabbits
  No great friend am I."

(*7th boy.*) "I 'm shocked," said the Collie,
  "At what you five say;
I follow the sheep-flocks
  To guard, not to slay."

(*8th boy.*) "I," said the Newfoundland,
  "All danger will brave,
To rescue the drowning
  From river and wave."

(9th boy.) "And I," said the Bulldog,
"Though sometimes I fight,
Protect carts and wagons
By day and night."

(10th boy.) "And I," said the Mastiff,
"Protect house and home
From thieves and from robbers
In darkness that roam."

(11th boy.) A dog from the country
Where Polar winds blow,
Said: "I drag the sledges
O'er ice and o'er snow."

(12th boy.) Then up rose a Lap-dog,
An impudent pup,
His talk was so silly,
The meeting broke up.

— *Worthington's Manual.*

PITHY PROVERBS.

An ounce of pluck is worth a ton of luck.
Idleness is the mother of mischief.
If a thing is worth doing, it 's worth doing well.
It is better to have the good-will of a dog than the ill-will.
It is hard for an empty bag to stand upright.
It is easier to seem good than to be good.
Duty first and pleasure afterwards.
In right there 's might.
Little strokes fell great oaks.
Never trouble trouble till trouble troubles you.
Patience and perseverance conquer all things.
One thing at a time, and that done well, is a very good rule, as many can tell.

A GOOD RULE.

'Tis well to walk with a cheerful heart
Wherever our fortunes call,
With a friendly glance and an open hand,
And a gentle word for all.
Since life is a thorny and difficult path,
Where toil is the portion of man,
We should all endeavor, while passing along,
To make it as smooth as we can.

— *Selected.*

THE STUDY OF SYNONYMS.

EXPLOIT, FEAT, AND ACHIEVEMENT.

1. All three are derived from the Latin through the French.

2. They all refer to something done.

3. EXPLOIT is a term of chivalrous character, indicating a deed of which adventurousness and strength are the characteristics.

A FEAT is the same thing on a smaller scale, and admitting a larger admixture of the elements of skill or cleverness.

ACHIEVEMENT points not only to the greatness of the deed but to the qualities which have led to it, which may have been less showy than force and skill, and have comprised perseverence, patience, and industry.

4. We speak of the EXPLOITS of Alexander the Great, and of a FEAT of horsemanship.

> "But loving virtue, all ACHIEVEMENTS past,
> Meets envy still to grapple with at last."

SAVE AND SPARE.

1. SAVE is derived from the Latin.

SPARE is derived from the Anglo-Saxon.

2. Both mean to preserve or prevent.

3. We may be SAVED from any evil, and that either by accident or design.

We are SPARED from those evils only which it is in the power of some one to inflict, and that by design with intentional forbearance.

The difference may be seen at once in the two phrases, "he SAVED my life," and "he SPARED my life."

4. "He was to have been shot as a deserter, but the clemency of his commander SPARED his life."

"He was struck by a bullet but the watch in his pocket SAVED his life."

SAFE AND SECURE.

1. SAFE is derived from the Latin through the French.

SECURE is derived from the Latin.

2. Both refer to freedom from harm or danger.

3. When we say, "He is SAFE," we mean in a state removed from danger; when we say, "He is SECURE," we mean in a state supposed to be free from danger. Hence SECURE has traveled on to mean entertaining a sense of safety, which may be even contrary to the facts of the case. "While they slept SECURE the enemy attacked the camp"; where SECURITY was not SAFETY, but emphatically the reverse.

Those who are out of danger are SAFE; those who are removed beyond the reach of danger are SECURE." SAFETY regards the present in connection with the past; SECURITY is also for the future.

4. "SECURE from fortune's blows."

"And so it came to pass that they escaped all SAFE to land."

BOOK NOTICES.

THE SENSES AND THE WILL. Part I. THE MIND OF THE CHILD. By W. Preyer, Professor of Physiology in Jena. Translated from the original German by H. W. Brown, teacher in the State Normal School at Worcester, Mass. New York: D. Appleton & Co. 1888. Price, $1.50.

This valuable work contains Professor Preyer's observations concerning the mental development of the human being in the first years of life. The author kept a complete diary of his observations of the mental growth and development of his son from the time of his birth until he was three years of age. He occupied himself with the child, at least three times a day, and almost every day. The substance of the diary has passed into this book. The book is divided into two parts: the first part concerning the development of the senses, the second being the development of the will. Professor Preyer watched closely the child's movements when brought in contact with a light, and observed the time when he first seemed to notice the light, and then as he grew older watched the effect of a sudden light, of a quick motion near the face, and the different effects produced by the same thing when the child was wide awake and when just wakened. The author has evidently given the subject a careful study and observed closely the mental development. The result of his observations is clearly stated, making the work one of great use to students of psychology, and a careful study of this work will do much to put one in possession of the method of studying mental growth in children.

PRACTICAL LESSONS IN THE USE OF ENGLISH FOR GRAMMAR SCHOOLS. By Mary F. Hyde, State Normal School, Albany. 226 pp. Boston: D. C. Heath & Co. Price, 50 cents.

This excellent little text-book on grammar and English is the second of a two book series and is adapted to the grammar school grade. Its treatment and arrangement are eminently philosophical and unusually practical. It deals sufficiently in technical grammar for correct use of language and gives constant graded instruction in composition writing. The pupil's powers of observation are cultivated at every step, while he is trained to think clearly and independently. The composition exercises are lessons in the expression of thought. This book will take high rank and will rapidly come into a wide use in the schools.

ELEMENTS OF PRACTICAL ARITHMETIC, containing exercises for class drill, both oral and written. By John P. Payson, former Master of the Williams School, Chelsea, Mass. Boston: Lee & Shepard. Price, 55 cents.

In this valuable little volume the object of the author has been that all analyses and illustrations shall conform to the methods pursued in the business world, and thus make the book practical rather than theoretical. To secure this result, each special subject has been prepared under the superintendence of a person whose life-work has made him master of that particular branch, thus giving the shortest and best methods, and those which are actually used by business men. Every example from beginning to end has been prepared for the place it occupies, and the author says that, so far as he is aware, none of the examples has before appeared in print. The work is of great value to the teacher as giving a large number of new examples, and also from the fact that it gives the business method of performing the various examples.

THE STORY OF THE CITY OF NEW YORK. By Charles Burr Todd. Illustrated. 478 pp. New York and London: G. P. Putnam's Sons.

In this volume is presented a brief but comprehensive survey of the causes leading to the founding of New York. and of the various agencies contributing to her wonderful growth, with narratives of domestic details and romantic incidents which render the story clear and complete. Though planned especially for younger readers, — the book being dedicated to the young people of the city of New York, — readers of all ages will find the work of much interest and worth. The noble and dignified history of New York; her progress, which challenges the wonder of students of social science the world over; and her great future, impossible to forecast. all call for the most careful attention and study, especially of the young people of to-day. The Appendices contain a list of the mayors of the city from the Revolution, and a chronological record of notable events. The many fine illustrations and maps add much to the value of the work.

SEA-SIDE AND WAY-SIDE. NATURE READERS. By Julia McNair Wright. Boston: D. C. Heath & Co., publishers. 1888.

This very attractive little reader for the primary grade gives a full account of the lives and habits of the crab, the wasp, the bee, the spider, and some of the shellfish and sea animals, in such simple and easy language as to be adapted to the little one's first lessons in reading. The book contains good, clear illustrations of the animals described and is printed in large, clear type. The children cannot fail to be interested in their work with such a primer.

FIRST GERMAN READER on the Cumulative Method. By Adolphe Dreyspring, author of "The Cumulative Method," "The German Verb-drill," "Easy Lessons in German," etc. New York: D. Appleton & Co.

This attractive appearing German Reader is a narrative in which the varied activities of childhood are presented in the plainest, simplest, and most facile language. One of the designs of the story is the bringing out of prominent grammatical features, such as different classes of verbs, force and value of prepositions, use of adjectives, and enough idiomatic expressions to pave the way for a more thorough study. The book is well printed on excellent paper and is strongly bound.

CHEERFUL ECHOES FROM THE NATIONAL KINDERGARTEN. For children from three to ten years of age. Words and music. Written and compiled by Mrs. Louise Pollock, Principal of the Kindergarten Institute, Washington, D. C. Published by Henry A. Young & Co., Boston, Mass. Price, 50 cents.

This little volume gives, besides a number of sweet and bright songs for the children, instruction which will be of great value to the teacher. The selection of appropriate songs and the manner in which the younger children are taught to sing are of vital importance.

OUR REPUBLIC. A Text-book upon the Civil Government of the United States. With an Historic Introduction. By Professor M. B. C. True and Hon. John W. Dickinson. Boston and New York: Leach, Shewell, & Sanborn. Pp. 264. Cloth. Price, 84 cents.

"It is the object of this treatise to place before the student such a statement of the actual agencies of the government of the nation as shall enable him the better to understand the silken bonds of authority which restrict, though unseen." In addition to a somewhat full description of the various departments of our national government under the Constitution, the book treats, quite at length, of the State, its officers, laws and their operation, the county, city, town, taxes, education, juries, mortgages, railroads, wills, insurance, and many other interesting topics. The rapidly growing and strengthening sentiment among American educators in favor of a more general and systematic study of civil government in our common schools is one of the hopeful signs of the times.

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Common School
Education,

DEVOTED TO THE ART OF INSTRUCTION.

VOL. II. JUNE, 1888. No. 6.

COUNTRY SCHOOLS.[1]

BY SUPERINTENDENT J. G. EDGERLY, FITCHBURG, MASS.

I.

A CERTAIN amount of theory is expected in all that is written upon any topic connected with school management. It is not surprising that diverse theories are set forth. The writer of this article does not claim to be familiar with all the phases of district school life, nor does he presume to be able to instruct all who may attempt to teach in them. He attended such schools when a boy and in them made his first efforts at teaching. These circumstances warrant him in speaking in their favor. Many of those who ridicule them never attended one, never attempted to teach one. A few hasty visits or the reading of a description given by some one not very familiar with their methods should not form the basis of our judgment concerning them. Many of the best teachers to-day know very little of the duties of a district school teacher. We have in our minds too frequently the ideal school. We speak of what ought to be under conditions that are impracticable in many instances. The district school has been mentioned too often with contempt, and it is not surprising that many people think that there is nothing to be said in its favor.

[1] Copyright, 1888, Eastern Educational Bureau.

The material composing the school must be taken into account. The district school is closely allied to the home life of a community, and the teacher is a part of this community. It would be well for all teachers were they familiar with the surroundings of their pupils, but it becomes a necessity in district schools, for there the acquaintance of teacher and pupil cannot be limited to the school-room. It must extend to the fireside; the teacher must meet the parents at the home, in the store, in the shop.

Some idea of the organization and of the work done in a country school may be gained from a statement detailing the experience of the writer in the beginning of his pedagogic career. The events of the first day of the term come vividly to mind. The teacher was a young man fitting for college; the youngest of the forty pupils in attendance was four years of age, the oldest, twenty-one. The degrees of scholarship were as varied as the ages. The child who had never attended school before was there to learn the alphabet (the word method was unknown in that locality at that time), the young lady who had taught the preceding summer was in attendance to prepare for the next summer's work, the young man of nineteen or twenty who had "ciphered through Greenleaf's National Arithmetic" had returned to deal with algebra and natural philosophy. Some had ciphered to square root, and at that point they must begin, regardless of proficiency; others were scattered along from addition to percentage. Each book of two or three series of readers was there — the pupils could read in no other. Geographies and spellers were numerous.

Sunday, the day preceding the opening of the term, was spent with the prudential committee, the person whose duty it was to hire the teacher. Monday night the teacher began to "board around." He was to board in each family represented in the school; at least twenty in all. The teacher apportioned the time to the account of each pupil. Some dwellings were near the school, some were two miles distant. Dinner, of which there was at all times a bountiful supply, was carried and eaten at the school during the noon intermission of three quarters of an hour. This was a social hour, whose influence extended through the day.

The people were cordial, the visits to the several families were enjoyable, and the opportunity afforded of becoming acquainted with the people was of great help to the teacher. The experience of that winter term was valuable.

There was a spelling school one evening a week, which was attended by the inhabitants of the district, old and young, and frequently by those from other districts; while at times delegations from adjoining towns were present. Sides were chosen, the school-master selected the words from any spelling-book, and the one who "stood up" the longest was the hero of the hour. This evening spelling school was the means of interesting a large number of people in the welfare of the day-school. The public opinion of the district should be in favor of the teacher, and such gatherings, if properly managed, tend to this.

Certain customs existed in those days which are not familiar to the boys and girls attending city schools. One of these — a time-honored one — was "to fasten out the teacher" the first day of January. The pupils took possession of the school-room on that day, fastening the doors and windows securely, so that the master might not gain admission. He was obliged to resort to force or strategy if he desired to effect an entrance. A teacher has been known to procure a ladder, climb to the top of the chimney and place a board thereon in order to "smoke out" his pupils. It was regarded as the wisest course, generally, to leave the scholars in undisputed possession of the premises.

School was in session six days one week, five the next. It was the custom in some towns to keep each Saturday forenoon, but the alternate Saturday was observed as a holiday in the school to which these observations refer.

The question is asked frequently: "Why was it that in the old district school pupils made more progress in a term of twelve weeks than some pupils do now in the graded schools in forty weeks?" The question implies that all in those schools advanced rapidly, which was not the case. We need not disparage the system of graded schools to show that some pupils in the country schools make good progress. The conditions are not understood. There is not so much to attract attention outside of school as in the cities, consequently more work relating to school can be done at home. It was not unusual to find in attendance in the winter season young men and young women from eighteen to twenty-one years of age. A young man eighteen years of age, studying arithmetic and grammar, could accomplish twice as much in a term as a boy of eleven or twelve. The graded schools of to-day have no place for pupils sixteen or eighteen years old, who desire to review the common branches. They feel out of place in a grammar grade, with pupils from three to five years younger than themselves, and frequently they are not allowed to enter a grammar school unless they can pursue all the branches of study, which is not practicable. The high school cannot provide for them, and, as a result, they discontinue their studies, or, in some cases, attend a select school. The district school afforded an excellent opportunity for these pupils and they improved it. Many good scholars came from those schools, who subsequently attained high rank in their classes in the academy and the college. Some suggestions can be made which may prove of service to those intrusted with the management of district schools, although they may apply with equal force to the work of city schools.

It is well enough to tell us that arithmetic should be taught, that the dictionary should be used, that compositions are to be written, that there must be declamations. We know all this; the young teacher knows this; but how shall it be done? We seek for something tangible. If the children are to be interested in school work it must be done by interesting ourselves in that which pertains to their home life.

The transition from home life to school life must not be too abrupt. The teacher should become acquainted with pupils, if possible, before the term opens. Inquiries should be instituted for the purpose of ascertaining who are the leaders in scholarship, and also in turbulence. The teacher who can call by name the first morning a number of the pupils is a power in the minds of the members of the school. Let him make a plan of the schoolroom, associating the name of the pupil with the desk assigned him, so that the question, "What is your name?" may not be necessary. We possess an advantage when we can address any one in this manner. In the school, the street, or the legislative assembly, the direct gaze is a power. The man that meets you in the street and, looking at you, greets you by name in a positive manner, has your regard in a higher degree than the one who says "Good morning, sir," in a tone which indicates that he does not know or care whether he is addressing Mr. Brown or Mr. Jones.

METHODS OF TEACHING ARITHMETIC IN PRIMARY SCHOOLS.[1]

BY LARKIN DUNTON, LL.D.,
Head Master of the Boston Normal School.

XVI.

DIVISION, CONTINUED.

Dividing by Three.

FIRST develop through illustrations — as, for example, balls on the numeral frame, sticks, buttons, or marks of various kinds on the board — the third part of 3, 6, 9, 12, 15, 18, 21, 24, 27, 30, 60, 90; then the third part of 1 and 2. The latter may be done by dividing a piece of paper into 3 equal parts, and naming each part ⅓; then by treating a second piece in the same way. A practical problem may be used for the same purpose: three children have 2 apples to divide among them; what part does each receive? They cut one apple into 3 equal parts, and each takes 1 part, or ⅓ of an apple. They then treat the second in the same way. Each child then has ⅔ of an apple; so ⅓ of 2 apples is ⅔ of 1 apple. Or, lay two equal circles of paper one upon the other, and cut them into 3 equal parts. Each double part is ⅓ of the 2 pieces, or ⅔ of 1 piece.

In the development of the process of dividing by 3 it will not be necessary to divide the work into stages so carefully graded as in the treatment of division by 2. I will, however, indicate the corresponding stages, as they are always useful in the treatment of dull pupils. They are the following: —

(*a*) 3, 6, 9, 12, 15, 18, 21, 24, 27, 30, 60, 90.
(*b*) 1, 4, 7, 10, 13, 16, 19, 22, 25, 28.
(*c*) 2, 5, 8, 11, 14, 17, 20, 23, 26, 29.
(*d*) 33, 36, 39, 63, 66, 69, 93, 96, 99.
(*e*) 42, 45, 48, 51, 54, 57, 72, 75, 78, 81, 84, 87.
(*f*) The rest of the numbers below 100.

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[1] Copyright, 1887, by Larkin Dunton.

An example will show the agreement of the treatment with that of dividing by 2.

Three boys are to divide 89 cents among them; they have 8 dimes and 9 cents. How many cents does each receive?

Teacher. How many dimes can each take?

Scholar. Each can take 2 dimes.

T. What will be left?

S. 2 dimes and 9 cents = 29 cents.

T. Can they divide 29 cents at once?

S. No, for 29 is not found in the threes of the multiplication table.

T. What is the next number below 29 that is found there?

S. 27 is the next number.

T. What is a third of 27?

S. 9 is a third of 27.

T. How many cents has each now?

S. $20+9=29$.

T. How many cents are still to be divided?

S. 2 cents.

T. How much does each receive of 2 cents?

S. $\frac{2}{3}$ of a cent.

T. How many cents has each altogether?

S. $20+9+\frac{2}{3}=29\frac{2}{3}$.

The pupil must finally be brought to the point where he can give the following solution in substance alone: —

We cannot divide 89 immediately by 3, because it is not found in the threes of the multiplication table. The next number found there below 89 is 60. A third of $60 = 20$. Now 29 remains to be divided. As 29 is not in the threes of the multiplication table, we divide the next lower number, 27. A third of 27 is 9. We have now divided 87, and 2 remains to be divided. A third of $2 = \frac{2}{3}$. So that the third part of $89 = 20+9+\frac{2}{3}=29\frac{2}{3}$.

Written exercises in dividing by 3 are not to be assigned to the pupils till they have gained a thorough understanding of the matter and some facility in solving problems. The written expression for the example just given will appear as follows: —

$\frac{1}{3}$ of 89.		3 in 89.
$\frac{1}{3}$ of $60=$ 20.		3 in $60=$ 20 times.
$\frac{1}{3}$ of $27=$ 9.	or,	3 in $27=$ 9 times.
$\frac{1}{3}$ of $2=$ $\frac{2}{3}$.		3 in $2=$ $\frac{2}{3}$ times.
$\frac{1}{3}$ of $89=29\frac{2}{3}$.		3 in $89=29\frac{2}{3}$ times.

Which form is to be used will depend upon the special statement of the question and its solution.

After the treatment of division by 2 and 3 it will not be necessary to go into particulars in regard to dividing by 4, 5, 6, 7, 8, 9, and 10. The same method is to be followed with all these numbers. When they have all been taught, the pupils may be required, by way of review, to divide a number by each of the fundamental numbers in turn. Great facility should be attained in the division of those numbers which are of special importance in business; as, 12, 24, 25, 30, 50, 60, 100.

It will be observed that division, as indicated above, depends upon the separation of numbers into tens and units, although the words tens and units have been for the most part avoided. Let us divide 89 by three, using these terms: —

89 consists of 8 tens and 9 units. A third of 8 tens is 2 tens, with a remainder of 2 tens, which are equal to 20 units. Add 9 units and the sum is 29 units. A third of 29 units is 9 units, with a remainder of 2 units. A third part of 2 units is $\frac{2}{3}$. Hence, $\frac{1}{3}$ of $89 = 2$ tens $+ 9$ units $+ \frac{2}{3} = 29\frac{2}{3}$.

This solution requires more statements than the one given above; and there is danger that some of these may escape the memory. Frequently the process is shorter if the number to be divided is separated into the parts indicated in the first solution; as, $89=60+27+2$. The separating of numbers in this way is the most important part of division.

In the preceding work on division it must appear that there is a necessity for the most careful separation of the work into stages founded upon the degree of difficulties to be overcome; so that the work will conform to the educational maxim: From the easier to the more difficult. First come the numbers found within the multiplication table; then follow those without this table, but divisible without a remainder; and finally, those numbers which lie beyond the table, but are not divisible without a remainder.

Some of the work in the division of numbers below a hundred is no doubt more difficult than work with numbers between 100 and 1,000; and yet these are fundamental difficulties, and it is better to conquer them in connection with small numbers.

In some cases, however, it may be well to limit the division of numbers at this stage, and not apply it to all numbers. The following may be a good selection of numbers for this purpose: —

By 2 divide numbers from 1 to 20.
„ 3 „ „ „ 1 „ 30.
„ 4 „ „ „ 1 „ 40.
„ 5 „ „ „ 1 „ 50.
„ 6 „ „ „ 1 „ 60.
„ 7 „ „ „ 1 „ 70.
„ 8 „ „ „ 1 „ 80.
„ 9 „ „ „ 1 „ 90.
„ 10 „ „ „ 1 „ 100.

Chart XIII will be found useful at this stage, because it contains all numbers below 100, so arranged that they can be readily assigned for practice in division: —

By 2, series a, b.
„ 3, „ a, b, c.
„ 4, „ a, b, c, d.
„ 5, „ a, b, c, d, e.
„ 6, „ a, b, c, d, e, f.
„ 7, „ a, b, c, d, e, f, g.
„ 8, „ a, b, c, d, e, f, g, h.
„ 9, „ a, b, c, d, e, f, g, h, i.
„ 10, „ a, b, c, d, e, f, g, h, i, k.

The number 100 should receive special consideration at this time. One kind of exercises is the finding of every two parts of which 100 consists; for example: —

99+1, 98+2, 97+3, 96+4, 95+5,
94+6, 93+7, 92+8, 91+9, 90+10,
89+11, and so on, to 50+50.

Another kind of exercises is the following: 100 is equal to

1×100, 2×50, 3×33+1, 4×25,
5×20, 6×16+4, 7×14+2, 8×12+4,
and so on, to 50×2.

A third kind of work which ought to be done before passing on to the treatment of numbers to 1,000, is making change from a dollar for any smaller sum; for example: 33 cents from a dollar; the change may be 2 cents, a nickel, a dime, and half a dollar, or 2 quarters.

DRAWING IN PRIMARY AND GRAMMAR SCHOOLS.[1]

BY WALTER S. PERRY,

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IX.

DECORATION OF FORM.

DESIGN, as seen in much of our decorated manufactures, is too often considered as arrangement simply, and governed by no fixed principles. It should be arrangement governed by laws of symmetry, harmony, and proportion, each of which must be learned separately by the child, and later his drawings should combine the three. But arrangement can never cover up the defects of poor proportion and lack of harmony in form and outline. It is the most easily learned, and therefore comes first, and children may best learn this element of decoration by the use of models, tablets, and sticks.[2] It is a mistake to begin with lines and points; models, tablets, and sticks mean much more; they become units for repetition, and when drawn in outline give clear, well-defined shapes, and prevent the crowding together of lines in meaningless combinations.

The children should learn to arrange them in the most pleasing manner, along a line, about a center, and by alternation. Having learned to arrange and to draw various combinations of geometric models and tablets, they should learn to design units of their own; but it must be remembered that to simply produce a unit differing from a copy is not necessarily designing and work always to be encouraged. It must be of pleasing proportion, simple in outline, the curves and straight lines well balanced and harmonious in combination. How can this best be taught? We should expect but a slight variation at first, and as this modification of units, with applications to design, is to extend through some years of work, all the object-work, so far as possible, should be such as to lead the pupils to think of the proportion and the reason for the various details of construction.

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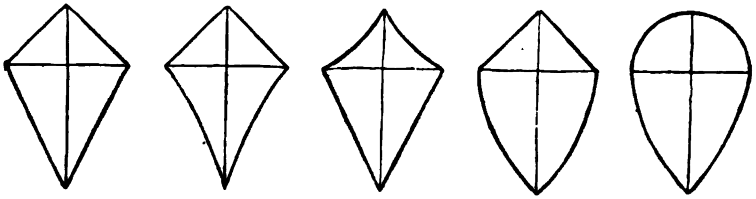
[1] Copyright, 1887, by Walter S. Perry.

[2] See description and illustrations in papers Nos. I and III of this series.

Object-drawing must be the basis of all work in drawing; but there comes a time when the pupils, having learned the principles of constructive and representative drawing, should not always have the object placed before them. If the principles have been taught, the pupils should be able to adapt them to problems and exercises requiring a full development of thought and of the imagination. Pupils should not draw simply what they see with their eyes, but what they see with the mind, so to speak; for in the mind must exist the conception. Therefore we teach drawing from objects until the pupils have learned to represent the edges and outlines of the various geometric models and combinations, and then at times require them to design and to draw useful objects which are pleasing to the eye, correct in construction, and right in principles of representation.

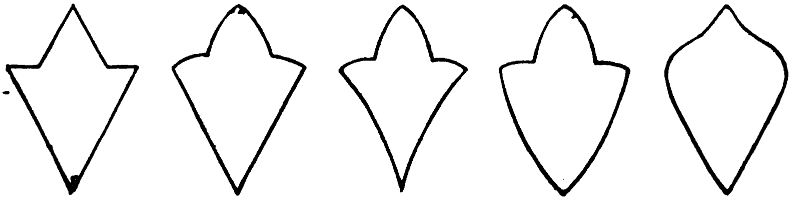
For an illustration we may use a tumbler. The pupils have learned how to draw the geometric views, or perhaps the appearance of a cylinder or cone, and to measure the proportions of an object with the pencil held at arm's length. To give the tumbler simply as an object to draw from at this stage of the work would not be making the best use of the pupils' time. If, however, they are asked to design a tumbler new thoughts are developed. The drawing can be made in a few moments if made from the tumbler, but when the children are asked to design one they have to think out the proportions. Many at first will design tumblers which could not easily be held in the hand, being too broad. Others will make those with a base too narrow for use and for good proportion. The tumbler is as easily designed as any useful object, and therefore is mentioned first, and when the pupils can readily draw one of pleasing proportion they may design a tin cup. The cup has not the same proportions as the tumbler for various reasons, which the pupils should study. It has a handle, and is not to be carried in the same way as the tumbler. Its handle also calls for thought, and one must be designed which will illustrate strength and adaptation to the purpose for which handles are made. A tea-cup calls for still more thought, as it is to hold liquids which are to be kept hot, and a shallow cup, broad at the top like many tin cups, would not be suitable. A bowl is an excellent thing for the pupils to design, also vases, simple in outline, and later on they may design a bell with handle, a bracket, and many other objects or parts of objects. Such work not only demands thought on the part of the pupil in regard to fitness and adaptation to purpose, but the work in design is of the very best character, as it teaches the pupils to consider what proportion, curvature, etc., will make the most pleasing forms. This work in constructive design should extend through the entire course, and whenever it is possible for the pupil to think out the construction of an object, or any part of an object, he should do so if he has already learned the principles of representation by drawing the many geometric solids.

FIG. 1.



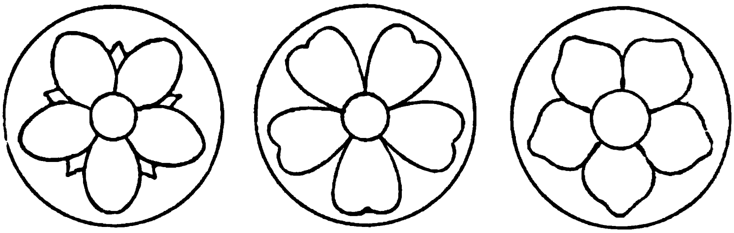
But side by side with all this work there should be lessons in decorative design which will deal with units more abstract, but nevertheless real, because they may frequently be cut out of colored paper, and pasted into the books to form rosettes, borders, etc. The first unit to be used may be kite-shaped, as seen in the first illustration. This shape is a type form of many units used in decorative design. It is a good form for the pupils to work with, as the growth and development of a unit can be shown so easily by its use. The first row of illustrations shows simple modifications of this one unit, using the same number of lines, and even though all these be drawn on the board and then erased, it will be found difficult for the pupils to reproduce one or more of them and make them of pleasing proportion, or to curve the lines to look well with other lines. These units may be drawn on and cut out of paper and used to make rosettes, and by cutting off the points to give stability, borders may be made. Such work is of far more value to the child than to design forms which are ugly in themselves and whose only merit is originality.

FIG. 2.



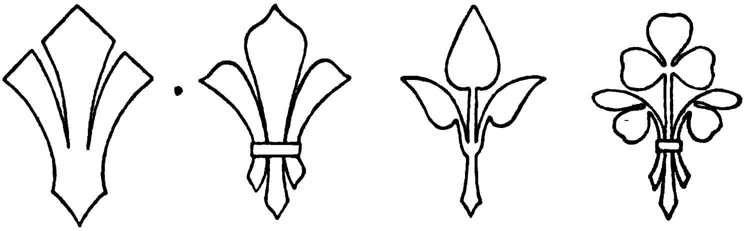
The second series of units shows further modifications with the addition of two lines. Many children will at first make the units too small at the top, others will make them too large, and still others will curve some of the lines too much, thus spoiling the proportion. The child's eye is trained for beauty of form by a careful study of the proportion of all parts of a unit of design, and by a proper balancing of the lines. He should learn to cut off, to add on, or to curve a line more or less till the most perfect shape possible is gained.

FIG. 3.

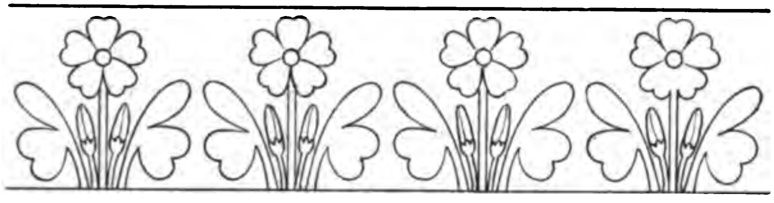


Pupils find it difficult sometimes to conventionalize a flower or leaf, but if they learn first to design a simple unit they will look for modifications in the forms about them. A flower will suggest a unit, and in the study to get the best shaped unit from the most fully developed petal they get the type form, which, by repetition about the center, gives the best conventionalized form of the flower. The printed rosettes illustrate this work, and they may be used singly, or repeated for a border or to cover a surface.

FIG. 4.



The first unit given may now be further modified by division (Fig. 1). The parts branching out of each other in such a way as to give stability and good proportion. Fig. 2 illustrates further modification, the parts being held together by a band. These two units may be greatly modified by changing straight lines to curved, and by cutting off the angles in various ways. They illustrate also the principles of treatment of plant-forms, first: those whose leaves branch out of a main stem, and second, those in which the leaves and flowers have long, individual stems, as seen in Figs. 3 and 4. The last illustration shows an application of the units in the formation of borders. At first the very simple units may be used, as already explained, by cutting off the points to give stability. A great many modifications of Figs. 1 to 4 may be similarly applied.



PRACTICAL METHODS OF TEACHING SPELLING.[1]

BY ANNA B. BADLAM,

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III.

THE TRAINING OF THE VOICE, CONTINUED.

IT is to be presumed that, while this training of the *ear*, the *voice*, and the *eye* has been systematically carried on, the *hand* has, through a series of *elementary* lessons in *writing*, received the training that will enable the child to make a copy upon his slate of some of the written forms of the words, which he *hears*, *speaks*, and *sees* in these early lessons.

EXERCISES FOR EYE AND HAND.

DIRECTION. — 1. Write each lesson legibly upon the blackboard. 2. Have each word pronounced and sounded. 3. Let the children use the words in sentences. 4. Have the children copy the list upon the slates.

Lesson 1. Short sound of the vowel *a*.

cat *can*

mat *man*

rat	ran
pat	pan
fat	fan

Lesson 2. Short sound of the vowel *a*.

cat	can
m—	m—
r —	r —
p —	p —
f —	f —

N. B. Direct the children to fill in the blank spaces, so that the words shall end like the first word in each column.

Lesson 3. Short sound of the vowel *e*.

met	men
pet	pen

Lesson 4. Short sound of the vowel *e*.

let	leg	led	leg
pet	peg	bed	beg

Lesson 5. Short sound of the vowel *e*.

let	leg	led	leg
p—	p—	b—	b—

N. B. Direct the children to fill in the blank spaces.

Lesson 6. Short sound of the vowel *i*.

fit	fin
wit	win

sit	*sin*
bit	*bin*
pit	*pin*

Lesson 7. Short sound of the vowel *i*.

fit	*fin*
w—	*w*—
s —	*s* —
b—	*b* —
p—	*p* —

N. B. Direct the children to fill in the blank spaces.

Lesson 8. Short sound of the vowel *o*.

not	*nod*
hot	*hod*
pot	*pod*
cot	*cod*

Lesson 9. Short sound of the vowel *o*.

not	*nod*
h—.	*h*—
p—	*p*—
c—	*c*—

N. B. Direct the children to fill in the blank spaces.

Lesson 10. Short sound of the vowel *u*.

but	*bud*
cut	*cud*

Lesson 11. Short sound of the vowel *u.*

nut *nun*

rut *run*

Lesson 12. Short sound of the vowel *u.*

bud *bug*

mud *mug*

Lesson 13. Short sound of the vowel *u.*

but *bud*

c— *c—*

N. B. Direct the children to fill in the blank spaces.

Lesson 14. Short sound of the vowel *u.*

nut *nun*

r— *r—*

N. B. Direct the children to fill in the blank spaces.

Lesson 15. Short sound of the vowel *u.*

bud *bug*

m— *m—*

N. B. Direct the children to fill in the blank spaces.

The more carefully all this work is done, the clearer the mental pictures the child will form of the words he has been considering.

This work cannot be hurried or slighted, else these mental pictures will be imperfect and indistinct, and the child's memory fail him when he tries to *reproduce* what he has seen as the written form of words.

While the teacher should hold definitely in mind the particular work she wishes to give the child, in order, that he may learn to write words correctly, she should, as far as possible, utilize such work in connection with any instruction she has already given in language and in reading.

If the idiomatic expressions *I have*, *I see*, *Can you see?* *Do you see?* have, through the lessons in reading, become familiar to the child, they should be made important factors in the written work which he puts upon his slate.

LANGUAGE SPELLING LESSONS.

1. Use the idiom *I have* with the words *a cat*, *a mat*, *a can*, *a pan*, namely:—

I have a cat.

I have a mat.

I have a can.

I have a pan.

N. B. Call attention to the *capital letter*, the article *a* before the name-word, and the *period*.

2. *I have a cat.*

______ *a mat.*

______ *a can.*

______ *a pan.*

N. B. Direct the children to fill in the blank spaces.

3. Use the idiom *I see* in a manner similar to that suggested in 1.

4. Use the idiom *I see* in a manner similar to that suggested in 2.

5. Use the idiom *Can you see?* in a manner similar to that suggested in 1.

N. B. Call attention to the *question mark*.

6. Use the idiom *Can you see?* in a manner similar to that suggested in 2.

7. Use the idiom *Do you see?* in a manner similar to that suggested in 1.

8. Use the idiom *Do you see?* in a manner similar to that suggested in 2.

Give similar lessons and use familiar words containing respectively the short vowel sounds ĕ, ĭ, ŏ, ŭ. As new idioms occur in the reading lessons form new sentences for slate-work, constantly repeating the list of name-words which the child has for his slate vocabulary, and calling his attention daily to the use of the *period* at the end of something *told;* the *question mark* at the end of something *asked*, and the *capital* at the beginning of the sentence or of the person's name.

ORAL SPELLING, OR DEALING WITH THE NAMES OF LETTERS.

Up to this time the child has dealt with sounds and their symbols, without reference to the names by which we designate them.

Many interesting exercises may be given by which the child may be led to perceive that letters have *names* as well as *sounds*.

A simple allusion to the fact that each person has a *name* and a *voice* will often help the child to comprehend this new idea about letters.

SIMPLE EXERCISES.

1. Let the teacher sound a word, as, m-ă-n, and write the symbol for each sound as she gives it. Let her suggest to the class that as these letters talk to them, it would be well to know their *names* in order to designate them.

Let her suggest to the class that they listen to hear *m*, or *a*, or *n* talk to them. Let her inquire if any child can talk like *m*, or *a*, or *n*.

2. Let the teacher call upon any child to give a sound, or, in other words, let her suggest that the child shall *talk* like some letter whose *name* she will tell, and whose *picture* she will make upon the board. Let her name and write each letter as she hears its sound.

3. Let her write several letters upon the board; as she names each letter, let her call upon any child to give its sound. Let her question what any letter upon the board, as *m*, or *t*, or *v*, says.

4. Let her allow each child to represent some letter. Let her call upon *Mr. M*, *Mr. B*, *Miss D*, or *Miss A* to talk. Let her represent the symbol of the sound in each case, and name each as a *picture* of Mr. M or Mr. B; Miss D or Miss A.

5. Let her write several words upon the board and call for the *name* of the *initial* letter in each; the *name* of the *middle* letter in each; the *name* of the *final* letter in each.

6. Let her pronounce a word, sound it (m-ă-t), and ask for the *name* of the *first* letter she is to write; the *name* of the *second;* the *name* of the *third* or *last* letter.

After a few lessons devoted to this line of work the class will be prepared to *pronounce*, to *sound*, and to *spell* words at sight from the blackboard preparatory to another line of work, when the memory, an important factor in this early training, shall lend an aid. It is sometimes hard to realize that the aim of primary school instruction should be twofold, and that we defeat the purpose of the work if we fail to teach the child to *remember* what we have labored to make him *understand*.

METHODS IN GEOGRAPHY.[1]

BY LARKIN DUNTON, LL.D., AND MISS L. T. MOSES.

X.

NATURE LESSONS, CONTINUED.

First Year.

THE lessons on the shore forms of land may be followed by lessons on the shore forms of water, if the children in studying the points and peninsulas show a desire to study the bodies of water that make into the land; otherwise, these lessons would naturally come as a part of the study of the body of water which the children first observe. As in the study of the land forms of the shore no names were given to the land that went out into the water, so here no names need be given to the water that makes into the land, unless the children are already familiar with them. But should the name of any point, bay, or harbor be well known to the children, the pupils can be led to see how this body of land or water, as the case may be, differs from the other shore forms of land or water, and to give the same name to all forms that are like the one observed.

As in the lesson on the forms of land they were all seen and described as parts of the land going out into the water, so the indentations are all seen as parts of the water going into the land. This gives the likeness, or generic quality, and the differences which the children observe and describe are the specific qualities.

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[1] Copyright, 1887, by Larkin Dunton and L. T. Moses.

In all cases where different species can be made objects of observation at the same time, it is better to lead the pupils first to see the generic quality, or likeness, then the specific qualities, or the differences.

The children will easily think of the benefits of the irregular coast-line, both in making it easier for boats to get to the land by the greater length of the coast, and of the means of safety afforded by harbors. They will also see how much more beautiful the coast is for these irregularities. The banks of a pond, a lake, or even of a river will frequently illustrate all these shore forms both of land and water.

The order of the remaining lessons on the water depends largely upon the situation and surroundings of the school. In one place the work should begin by observations of the great ocean itself, or the part of it that the children can see, while in the absence of such opportunity for observation the whole subject of the ocean would be omitted. In another place the brook that runs by the school-house would be the object to be first studied. Should the school be fortunate enough to have in its vicinity all the common bodies of water, the following order would be a good one: the ocean — the water and its movement and the shores; the land waters — brooks, rivers, ponds, and lakes.

The things to be observed about the ocean are its extent, — that it extends as far as we can see, and presumably farther, since the ships go out of sight, — the colors, saltness, and motions of the water, both the tide and wave motion. The waves are to be observed, with all their variety of height and color, the angry tossing and the white caps in a storm, and the long, low roll of the billows as they dash upon the shore in calm weather. The sound of the breaking waves is listened to again and again, and the sound when the wind is high is compared to that when it is calm. The rise and fall of the tide, the changing time of high tide, and the difference in height of high tides may all be carefully observed.

Should the lessons on indentations, or the shore forms of water, not have been given before, they would properly come in here. At this time, also, the cliffs and beaches, with the drift left by the waves and tides, should be observed; so should also the various forms of animal life clinging to the rocks or left upon the beach.

The children will like to think what the waves are like as they advance upon the shore, rank by rank, with their white caps sparkling in the sunshine; what the wave is like as the white foam curls along its edge and falls over, and what sounds are like the roar of the ocean. Their observations of the pleasure-boats, the fishing-boats, the steamers flying from post to post with their passengers and freight, and the great ships that go out to "their haven under the hill" will help them to think of the great use the ocean is to men. It is hoped that the children have learned somewhat to love the beauty and grandeur of the sea by this time, though they can hardly express as much.

The continuation of the observation is quite as useful and necessary in the lessons on the ocean as in those on the atmosphere, as, besides the changes of cloud and sunshine and the various aspects which morning and evening give, there are the changes of wave and tide to be observed. The same is mainly true of the other bodies of water; and so continued observation would be an element in the teaching of all bodies of water.

It is always desirable to begin the study of land waters by the observation of a brook. The children can come into closer contact with a brook than with any of the other bodies of water; and so, even if one or two excursions must be made in order to observe the brook, it is better to begin with it.

The first thing the children will observe in a fast-flowing brook will be the bright, sparkling water running swiftly or dashing in tiny ripples and falls over the rocks. The children will be pleased to find the swiftness of the current by throwing sticks into the water and watching them hurrying away. The pools at the foot of each little fall should be observed. The water should be tasted by the children, after they are cautioned in regard to any animal that may be in it.

The bed of the brook, with its smooth rocks covered in places with greenest mosses and ferns, in other places with pebbles and sand, should be observed, as should its slope, both the level places and the sharp descents where the rocks make the falls and rapids. The minnows and other animals that may be in the water should be observed.

The banks, winding as the water turns around a rock to find its bed beside it, are studied; and here the plants and trees that grow beside the stream and are kept green by its pure waters are seen, and those the children know are named.

Before further observation the children should stand and listen to the sound of the brook, and think and tell what it says to them.

It is well at this point to look at as much of the brook as can be seen. Its width may often be ascertained by walking across it, and its depth by looking through the clear water to the pebbly bottom.

It is well, if possible, to take the children to the source and let them see the spring as it bubbles out from under a rock. If this is not possible, it is well to take them to some place from which they can see the brook for some distance, as it winds down the valley like a thread of silver. The place where the stream pours into some other body of water should also be visited, if convenient.

Unless there are brooks flowing into the one studied, it will perhaps be as well to leave the formation of the brook by rain and snow to the next year's study; but should the question of the supply of water arise, the teacher can have the pupils look at the sloping hillsides and think where the little streams of rain would run. The use of the brook making green the land over which it flows, its beauty to eye and ear, its pure water so constantly given, will all be thought of by the children.

The lessons on the river will include the following things to be observed: the water, its color, surface, and movements; the islands in the river and any drift that it carries along in its current, also any boats that are on the river; the banks, their irregular shore-line, height, and fertility.

The uses of the river are the same as the uses of the brook; but, besides these, it serves to carry things from place to place, and gives people much pleasure in sailing and skating upon it and in swimming in it. Other uses — as, turning mills, affording fish, and supplying ice — may be given, if the children can learn them from their own observation.

Any pond or lake may give an opportunity to notice the slope of the land towards it and the streams that feed it and carry off the water. The water, in its color, smoothness or roughness, depth, length, and breadth, as far as they can be seen, should be observed and described, as should also the lilies or other water-plants growing either on the water or on that marshy border which is neither land nor water. The boats on the surface of the water and the fish that sometimes leap from it, the ice which makes such good skating in winter, should each receive attention as occasion for observing them comes.

The shores in their outline and elevation, the plant life upon them, whether in forests or farms, together with the houses, villages, or towns on or near the banks, are to be seen and described.

The attention given to the use of the pond or lake will serve to review many of the observations of the children; and some appropriate poem, or part of one, read at the end of this, as of the other lessons, will help make what has been seen more vivid and beautiful, and will serve to suggest things for which the children are to look on their next visit to the pond or lake.

These lessons, with the observation of the seasons as they change, will complete the work on nature for the first year. In the observation of the changing seasons only the most general facts of temperature and moisture are to be observed. The cold and snow of winter, the heat and rain of summer, with the budding and growing green of vegetation in the spring, and the glorious beauty of the harvest-time are sufficient for the little ones.

Before beginning the study of society in its simple relations to the child, it seems well to review some of the aims of the lessons on nature, so important in these lessons to the child. Like all other subjects studied in school, these lessons should aim to give useful knowledge, to increase mental power, to help in forming good habits of thinking and acting, and to make the child better.

Much depends, for the accomplishment of these aims, upon a clear understanding on the part of the teacher of the principles of education and the methods of applying them. The interest of the pupils in the work of observation has been largely depended upon for the knowledge to be acquired, as has the repetition of the observations and the comparison of the objects seen to-day with the same objects seen yesterday. So we would make constant observation by the pupils, frequent repetition and comparison of these observations, vital parts of all these lessons.

For the increase of power, the principle that the mind gains facility and strength by use should be constantly present during the lessons in the mind of the teacher, as it is the use of the pupil's power of seeing, remembering, imagining, and reasoning that will give the pupil's mind strength in performing these mental acts. The pupils, therefore, should perform many acts of seeing, remembering, imagining, and reasoning, that their minds may acquire power.

In the formation of habits, the pupils must do, and do repeatedly, those things that they are to acquire a habit of doing. It is true, both of the body and the mind, that they tend to repeat former acts; and the more frequently an act is repeated, and the shorter the intervals between the repetitions, the greater the tendency to repeat the act. So, to acquire a habit of accurate observation, the pupils must observe much and frequently and accurately; to acquire a habit of telling clearly what they have observed, they must frequently tell clearly what they see; to acquire a habit of strict attention to the work in progress, they must always strictly attend when work is in progress. The teacher should remember, too, that in all work which is to result in the formation of good habits, either bodily or mental or moral, there must be no variation, but always the thing that is to be done as a habit must be done as it should be done.

The work all through these nature lessons should tend to make the child better. The observation of nature should increase the child's love of beauty and his love for and gratitude to the Creator of all beauty. The accurate expression in language of what he observes and thinks should give him a love of truth and a habit of speaking it; the constant thought of the use of everything in nature should help him to desire to be useful. But it must be remembered that good sentiments and desires are not enough to make any human being good; they must be carried out into action. The constant care of the teacher should be directed to this; and the child's love of beauty should result in his finding beauty in nature even when he is not directed by the teacher; in finding beauty in poetry, and so choosing that alone which is beautiful; in causing him to reject from his acts and thoughts things that are contrary to beauty.

His feeling of gratitude to the Giver should be fostered by turning his mind constantly to kind feelings, and to their expression to those who love and labor for him in the home and school, and by showing him how much his heavenly Father has given him. The love of truth should be carried into action, not only by his accuracy in these nature lessons, but in all his school work, so that in time truth shall be to him a very necessity of his character. The love of use may become his possession by allowing him to perform services for the teacher, for his classmates, and for others with whom he comes in contact; as the constant doing because he loves to do will make him thoughtful and unselfish. It need not be said to any teacher, even of slight experience, that all this does not mean lecturing, preaching, or much talking to the children. It means a natural, pleasant, intelligent use of the opportunities arising in their lessons.

LANGUAGE LESSONS AND EXERCISES.[1]

BY L. W. RUSSELL, A.M.

XII.

INTERJECTIONS.

THERE are several points in reference to the use and abuse of *interjections* and *interjectional phrases* which should receive careful attention in teaching language. (1) The tendency to use them too frequently, weakening what should be plain statements or questions by interjections which are out of place. (2) Indulgence in extravagant interjections. (3) Employing interjections which are mere slang or shade into it. (4) Still worse, making use of asseverations which, if not positive profanity, border closely upon it.

On the other hand, a judicious use of *interjected* words or expressions is highly advantageous. By their use we may arrest attention, excite emotion, and emphasize thought. The ordinary sentence-forms for the expression of calm thought or plain narrative and description are not always sufficient for strong feelings and vivid emotions. For such purposes we may throw in — *interject* — certain words which do give the coloring or emphasis desired.

Children readily run into bad habits in the use of interjections. It is easier to give a fairly intelligible expression to the wants and feelings by the use of words divested of structural connection in sentences than to speak in sentence form; hence, children grow into a habit of using independent bits of speech or incomplete sentences, with many interjections of various grades.

Teaching. — Teach the nature of interjections by marked examples of their use, employing such as have a positive propriety; as, oh! ha! ho! bravo! lo! adieu! hush! etc.

Show the independent character of these words, both as used

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[1] Copyright, 1887, by Eastern Educational Bureau.

alone and as thrown in among other words, grammatically connected.

Show that words of other classes are often employed to express emotion only; as, what! away! behold! wonderful! shocking! well done! welcome! off! come! beautiful!

Illustrate the *interjection* of phrases, forming no essential part of the sentences uttered or written, but used to impress what we are saying, giving force, emphasis, brilliancy, or softness; as in the use of *you know*, *I tell you*, *as it were*, etc.

Show the impropriety of many common *interjections* and *interjectional* expressions; as, *my gracious! by Jove! what the mischief! thunder!* and others still worse.

EXERCISES.

1. Speak the word *oh* so as to express joy, admiration, or delight.

Speak the same word so as to express pain or sorrow.

Speak the word *fie* so as to express dislike or contempt.

Speak the word *hem* so as to call attention; the word *hist* to command silence or quiet.

2. Use the following *interjections* with sentences so as to express some pleasing emotion: *hurrah! huzza! ha, ha! hay! bravo!* as, Hurrah! see the flag!

These to express disapproval: *poh! faugh! pshaw! tush!* as, Pshaw! it is not worth minding.

These to express wonder: *indeed! strange! what!* as, Indeed! is it possible!

These to express salutation or taking leave: *Oh! welcome! hail! good-by! adieu! farewell!*

These to express a wish for silence: *hark! hist! hush! behold!*

These to express fatigue or painful feeling: *heigh-ho! dear me! alas! oh! ah! well-a-day!*

Direction.—Be careful to place an exclamation mark (!) after the interjection, unless used in close connection with a sentence, when it may follow the latter; as, Hark! some one is knocking. "Oh, for a lodge in some vast wilderness!"

Make a clear distinction between the use of *O* and *oh!* The former should always be a capital letter, and used only with the name of some object addressed, or pronoun standing for it, or to express a wish or ardent desire; as, "O sleep, why hast thou fled my pillow?" "O that I had the wings of a dove!"

"Oh" may be detached from other words, having usually an exclamation mark after it; as, Oh! what a sight is here!

Use an interjection, in connection with other words, to express your feelings about a beautiful sunset; about a high mountain; to call attention to a flock of wild geese; to stop a horsecar; to express your fatigue after running; to indicate your languor on a hot day; to show your sorrow at the loss of a pet; to express your delight at meeting a friend; your regret at parting from a friend; your satisfaction at having a good lesson; your disapproval of an unkind act.

Extend similar exercises, both in the oral and in the written forms.

Change the following sentences into the exclamatory form, using interjections with them: —

The day is hot.
These flowers are beautiful.
Jumbo was a great elephant.
Do not run into the fire.
It is dark in this cave.
Keep quiet. I think a robber is in the house.
He has fallen through the ice.
This is very amusing.
Are you going to leave me alone?
I do not care.
Please go quickly.

Illustrations: —

Oh! how hot the day is.
Hi! keep out the fire!
What! are you going to leave me alone?

COMPOSITION EXERCISE.

A Holiday Walk.

[As a preparation for the written work, the teacher should hold a conversation with the pupils about their walks, suggesting, by questions and remarks, what things it is best to write about and the general line of arrangement of the matter. Bring to notice things adapted to the pupils' understanding and which will tend to intellectual and moral development.]

1. Who composed the party, and the object of the walk.

2. The day, the weather, the sunshine, the clouds, etc.
3. What I saw that was instructive or pleasing: the fine trees and their uses; the good roads; the pleasant by-paths; the fields of grain, vegetables, and grass; the fruit trees; the cattle feeding; the brooks watering the valleys; the birds singing.
4. The milkmen and marketmen going to the town: their usefulness, our dependence upon them.
5. Gathering flowers: how they hide in out-of-the-way corners, grow in the crevices of rocks, hang over the sparkling water, greet us pleasantly in many places.
6. How bare and desolate, wind-swept and sun-dried, it would be without trees and shrubs and flowers.
7. The greater enjoyment of things in nature from observing them and learning about them. They all may teach us lessons and have friendships for us.
8. The usefulness of such walks: health, pleasure, instruction.

THE HISTORY OF OUR COUNTRY: HOW TO TEACH IT.[1]

BY WILLIAM A. MOWRY.

VI.

THE GENERALS IN THE REVOLUTION.

I TOLD you some months ago that when we had finished our regular study of the Revolutionary war we should have a number of review lessons. One of them, you will remember, was to be upon the leading officers on both sides in that memorable struggle. I wish you would look over your text-books and any other histories you may have access to, and to-morrow we will consider what you can tell us of the leading British and American officers in the war, with special reference to the strategic plans, offensive and defensive, on both sides. Prepare lists of names and notes, biographical and military, in writing."

[The next day the class came together with a formidable flutter of notes and with evidently a great amount of interest awakened by their individual study.]

"Now, we are to generalize events to-day, and cause to pass before us a line of portraits, properly labeled, which will give us

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[1] Copyright, 1888, by William A. Mowry.

a series of pictures like a panoramic view of the great Revolutionary war. Edgar, when and where did the war begin, and who were the leading actors?"

"The war began in Massachusetts with the battle of Lexington and Concord, April 19, 1775. General Gage was in command at Boston, and the British force sent by him to capture military stores at Concord was under the command of Colonel Smith and Major Pitcairn."

"Elmer, who commanded at Bunker Hill?"

"Towards the end of May more British troops arrived in Boston, and with them Generals Howe, Burgoyne, and Clinton. On the sixteenth of June about one thousand Americans occupied Bunker Hill, and threw up breastworks to annoy the British in Boston and if possible to dislodge them from their position there. These Americans were under the command of Colonel Prescott. General Putnam and General Warren were also officers of the Americans. General Howe attacked them the next day with four thousand men, and after a sharp engagement the Americans, having exhausted their ammunition, retreated. The loss to the British was over one thousand killed and wounded, to the Americans' less than half that number."

"How was the American army at first organized by the Congress, Nettie?"

"The Continental Congress appointed George Washington commander-in-chief, and then chose four major-generals and eight brigadier-generals. The major-generals were Artemas Ward, Charles Lee, Philip Schuyler, and Israel Putnam; the brigadiers were Seth Pomroy, Richard Montgomery, David Wooster, William Heath, Joseph Spencer, John Thomas, John Sullivan, and Nathaniel Greene. Horatio Gates was adjutant-general, with the rank of brigadier."

"Who was the chief commander of the British forces during the first part of the war, Waverley?"

"General Sir William Howe. General Gage returned to England in the fall of 1775, after which the chief command devolved upon Lord Howe."

"Warren, will you tell us who succeeded General Howe, and when?"

"In 1778 General Howe went to England, and General Sir Henry Clinton succeeded to the British command."

"How long did General Clinton hold command?"

"Till the war was practically closed. General Carleton was appointed to the command in 1782, after the resignation of Lord North, when the British ministry had determined to prosecute the war no further."

"Now, Edith, tell us, please, something about the other British generals who figured in this war."

"There was General Tryon, who, in 1777, destroyed stores in Danbury and plundered New Haven and burnt Fairfield and Norwalk, Conn.; General Burgoyne, who attempted to cut off New England from the other colonies, and who was defeated at Saratoga and surrendered to General Gates; General Fraser, who was killed at Saratoga; General Pigot, who fought General Sullivan, in August, 1778, on Rhode Island; Sir George Collier and General Matthews, who went on a predatory excursion from New York to Virginia; General Lord Rawdon; Colonel Tarleton, the cruel; Major André, the unfortunate; and Lord Cornwallis, whose defeat at Yorktown virtually ended the war."

"Who was the greatest general on the American side?"

(*All, in chorus*): "General Washington."

"Who ranked second to him?"

(*All, together*): "General Greene."

"Now mention the leading American generals, one at a time."

The class then in order, one after another, name the following: —

"General Putnam," "General Sullivan," "General Stark," "Ethan Allen," "General Gates," "General Lincoln," "Mad Anthony Wayne," "General Lovell," "General Sumter," and "Benedict Arnold, the traitor."

"Who were the leading officers of our French allies?"

"General La Fayette," "Count d'Estaing," "Count de Rochambeau," "Count de Grasse."

"Our time has expired, and we have only laid the foundation for our review of the war. We will resume the subject next Monday, and I will divide the work among you. Those on the first settee may write each a short paper on some one of the British officers and his part in the war. Select your own subject, and let the paper be not more than five hundred words in length. Those on the second settee may write a similar paper each on some one American officer, giving your estimate of his work, his ability, and the value of his services. Those on the third settee may write each a paper, as follows: Thacher, on The Plan of Burgoyne's Campaign; Warren, on The French on Rhode Island; Emma, on The Winter at Valley Forge; Annie, on General Greene's Campaign in the South; and Walter, on The Surrender of Cornwallis at Yorktown. I will ask Mary to write on The Value of French Aid to the American Cause. The papers will be read, or a selection from them, and discussed by the class. You are excused."

[The following Monday was the most spirited lesson the class had had. Each one had confined his attention to one topic, and had studied up from all available sources. The whole formed the basis for a vigorous discussion of the merits and demerits of the several characters and the various plans of campaign of the war. The subject was continued on Tuesday, when it was finished.]

DEAN STANLEY, in his life of Arnold of Rugby, thus describes his method of teaching: —

" His whole method was founded on the principle of awakening the intellect of every individual boy. Hence it was his practice to teach by questioning. As a general rule, he never gave information, except as a kind of reward for an answer, and often withheld it altogether, or checked himself in the very act of uttering it, from a sense that those whom he was addressing had not sufficient interest or sympathy to entitle them to receive it. His explanations were as short as possible — enough to dispose of the difficulty, and no more; and his questions were of a kind to call the attention of the boys to the real point of every subject, and to disclose to them the exact boundaries of what they knew or did not know. With regard to younger boys, he said: 'It is a great mistake to think that they should understand all they learn; for God has ordered that in youth the memory should act vigorously, independent of the understanding — whereas a man cannot usually recollect a thing unless he understands it.' But in proportion to their advance in school he tried to cultivate in them a habit not only of collecting facts, but of expressing themselves with facility, and of understanding the principles on which their facts rested. 'You come here,' he said, 'not to read, but to learn how to read.'"

EDITORIAL.

FEW subjects connected with the schools are so generally misunderstood by the people as the matter of ***Moral Instruction.*** The cry of our Catholic brethren that the schools are godless is reiterated by many who evidently fail utterly to distinguish between religion and theology, a godly life and subscription to a creed.

"Pure religion and undefiled before God and the Father is this, To visit the fatherless and widows in their affliction, and to keep himself unspotted from the world." In this definition the apostle James but paraphrases the words of the divine Teacher when he named the greatest commandment of all and "the second which is like unto it": "Thou shalt love the Lord thy God with all thy heart, and thy neighbor as thyself."

Benevolence towards others, and an unspotted, clean, holy character like God, these are the two cardinal rules to be observed by all in this life.

THESE two great principles must be unfolded and illustrated in a great variety of ways for application to child-life. And it may confidently be asserted that this is done in the schools more fully and more effectually than anywhere else in our American life. The pulpit comes in contact with the people an hour or two a week. The Sunday-school touches the children for a single hour. But the school, through its teacher, its recitations, its general exercises, its habits of order, industry, regularity, punctuality, system, decorum, mutual rights, obedience to authority, and daily lessons for work, exerts a profound and lasting influence in forming, shaping, and developing character for life.

IN no other way can more efficient service be rendered in this character building than by storing in the minds of the pupils, especially the youngest, those memory gems which have become classic in our language, and which carry with them the open moral lesson without the necessity of adding, after the manner of the ancients, "Hæc fabula docet." All teachers of young children are especially urged to keep constantly before their minds and their eyes such small bits of poetry as have come down from the past, approved by the ages, and which cultivate a knowledge of God, of conscience, of right and wrong, of honesty, industry, purity of life, and goodwill to all. What a lesson can be drawn, also, occasionally from the derivation and meaning of words in common use! Explain the difference between *benevolent* and *beneficent; courage* and *bravery*, and the like.

BUT above all, store the mind with those gems which convey moral lessons in child language. The first lesson should be of God, and might well be given to the little ones in the form of the well-known lines: —

WHERE IS GOD?

In the sun, the moon, and sky,
On the mountain, wild and high,
In the thunder, in the rain,
In the grove, the wood, the plain,
In the little birds that sing; —
God is seen in everything.

THE next lesson might be upon the approving nature of conscience. And here let it be said that lessons upon right-doing and the approval of conscience for right-doing are always in place, but that lessons upon wrong-doing and the upbraiding of conscience for such acts are only to be used after the necessity is apparent. In a state of childish innocence, or the children's Eden, the "knowledge of good and evil" must not be thrust upon the little ones. The remedy for evil will need to be presented only after the evil has been found.

SATURDAY NIGHT.

How pleasant is Saturday night,
  When I 've tried all the week to be good,
Not spoken one word that was bad,
  But obliged every one that I could.

THEN let the Golden Rule be the next lesson, and let it be put in such language as appeals to childhood and the acts of children.[1] These three selections well fixed in the child's mind may be of more practical value to him in life as a citizen and a man, than a whole year's study of theology at an approved seminary would be in later life.

COERCION is always distasteful, and the instrument repulsive; hence the frequent antagonism between teacher and pupil; but when the former becomes a friend and companion the relation is at once changed into one of the utmost congeniality.

THE eighty-sixth anniversary of the founding of the East Greenwich Academy, Rhode Island, will be celebrated by a grand reunion of former students on Thursday, June 21, 1888. The literary exercises of the forenoon will be held in the academy chapel. They will consist of an historical sketch, a poem, and an oration. Following these exercises, a dinner will be served under a mammoth tent upon the campus.

It is requested that each former student send his present postoffice address to the Principal at once. To all who comply with this request there will be mailed a circular giving fuller information concerning the reunion.

ALL teachers are respectfully urged to make their arrangements early for attendance upon the American Institute at Newport, the second week in July. The meeting promises to be of rare interest and unusual value. Circulars giving full details will be forwarded to any address on application to the president, J. Milton Hall, Providence, or Superintendent G. A. Littlefield, Newport.

ON the opposite page is given a suggestive lesson, which will be easily read, even between the lines. Indeed, it may be called variously suggestive. No explanatory words are needed.

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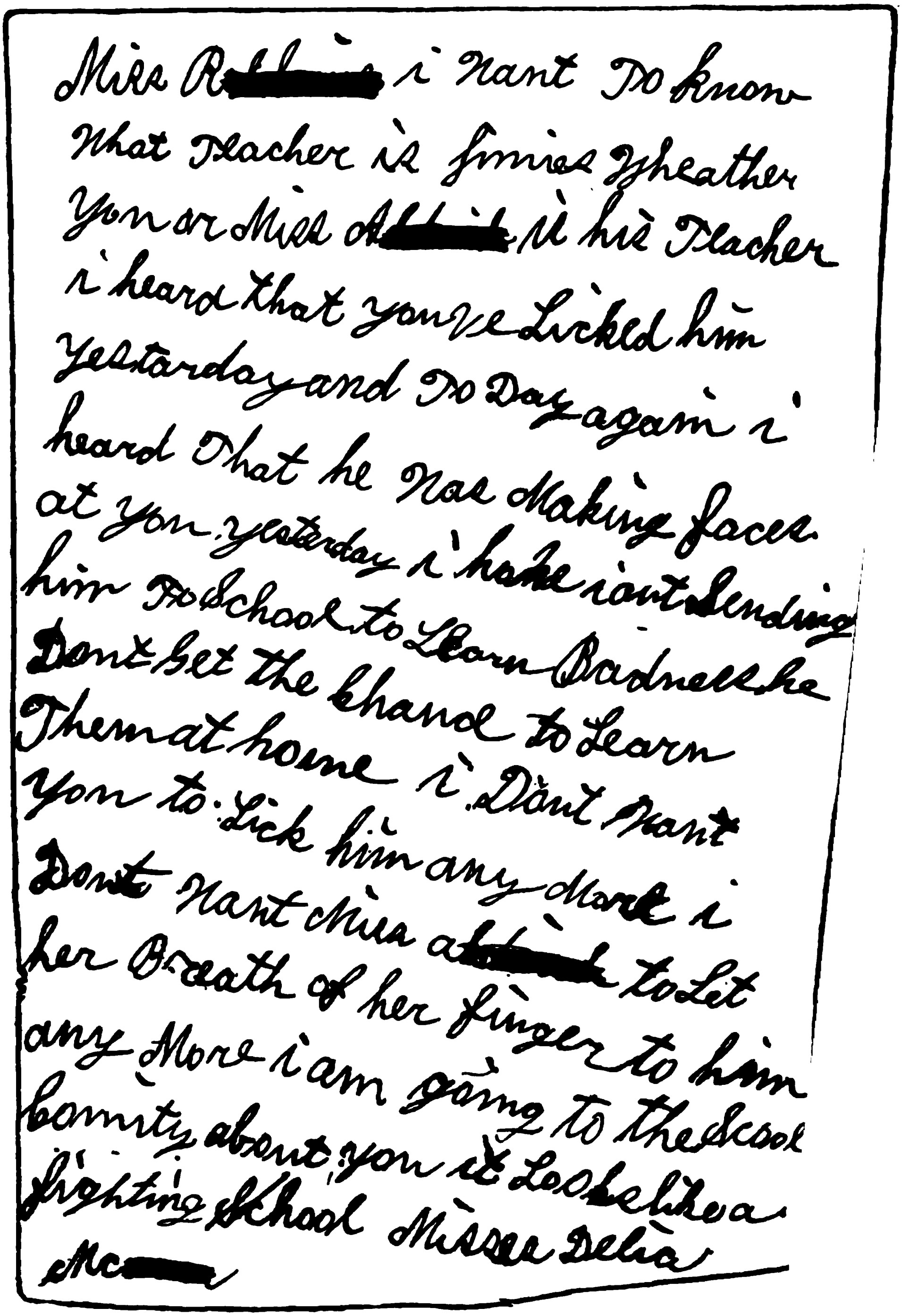
[1] See page 248.



Miss R[redacted] i want To know
what Teacher is Jimies wheather
You or Miss A[redacted] is his Teacher
i heard that you've Licked him
Yesterday and To Day again i
heard That he was Making faces.
at You, yesterday i hake iant Sending
him To School to Learn Badness he
Dont Get the Chance to Learn
Them at home i Dont want
You to Lick him any More i
Dont want Miss a[redacted] to Let
her Breath of her finger to him
any More i am going to the Scool
Comity about, you it Looks like a
fighting School Missea Delia
Mc[redacted]

HAPPY HOURS.

ARRANGED BY MRS. CAROLINE S. MORGAN.

THE GOLDEN RULE.

To do to others as I would
  That they should do to me,
Will make me honest, kind, and good,
  As children ought to be.

I know I should not steal, or use
  The smallest thing I see,
Or what I should not like to lose,
  If it belonged to me.

And this plain rule forbids me quite
  To strike an angry blow,
Because I should not think it right,
  If others served me so.

But any kindness they may need,
  I 'll do, whate'er it be;
As I am very glad indeed,
  When they are kind to me.

And whether I 'm at home, at school,
  Or walking out abroad,
I never will forget this rule
  Of Jesus Christ, the Lord.

[Selections and exercises appropriate for pupils of the grammar grade.]

BE SURE OF WHAT YOU SAY.

(*Enter two boys, one with a handful of marbles.*)

John. — Why, these are my marbles! Where did you find them?

Harry. — They are not yours, and I did n't find them, either.

John. — I tell you they are mine, for I lost two just like them.

Harry. — Suppose you did lose two just like them, that does not prove that these are yours.

John. — Whose are they, then?

Harry. — Mine. Tom Cole gave them to me.

John. — Well, Tom Cole found them, and they are mine, anyway.

Harry. — But Tom did n't find them. His Uncle Walter gave them to him.

John. — I don't believe it!

Harry. — Why don't you believe it?

John. — Because they are just like the ones I lost, and I never knew Tom to have one like them.

Harry. — Well, that is a poor reason. If I should lose a dollar, and some one else should find one, then would it be mine because I had lost one like it?

John. — No; that is different.

Harry. — Where is the difference?

John. — Why, dollars are mostly all alike, and you can't tell one from another; but marbles are not all alike; and when I see two just like the ones I lost, I have a right to believe they are mine.

Harry. — There are plenty of marbles in the world like yours; besides, you have no right to believe or say that somebody else found and kept your marbles unless you know it to be true.

John. — Well, it looks very suspicious, to say the least, and I shall just give Tom a piece of my mind when I see him.

Harry. — You have never known Tom to tell a lie or do a dishonest act; and you accuse him of being both untruthful and dishonest when you say that the marbles are yours.

(*Enters a Girl.*)

Mother. — What is the matter, boys? Not quarreling, I hope.

Harry. — I 'm afraid we would have come to that if you had not come in, mother. John has lost two marbles, and insists upon saying that these are his.

Mother. — Did you look for your marbles when you found that you had lost them?

John. — I did n't have time before breakfast, and I forgot it afterward.

Mother. — I know something about your marbles, I suspect. While you were at breakfast, Sarah went to clean your room, and found two marbles under your bed. She gave them to me after you left for school. Are these the ones you lost?

John. — Well, I was sure that those Harry had were mine.

Mother. — You were not sure; you only thought so. Without looking for your marbles, or inquiring of others if they had been found, you have accused Tom of finding and keeping them just because he had two like yours. It is mean and wicked to accuse others of doing wrong when we do not know, but only think so. "Think twice before you speak," and then *be sure of what you say.*

— *Sophie E. Smith.*

HOPE.

(Recitation for two girls holding anchors made of leaves or flowers.)

First Girl.

When our poor sad mother, cowering
  Underneath the Eden trees,
Heard the footstep in the garden,
  Heard God's voice upon the breeze;

When the words of doom fell slowly
  On crushed heart and throbbing brain,
While she loathed the taste forbidden,
  Sought excuses, sought in vain;

What was left of all her blessings?
  What did doom and judgment spare?
Oh, the Merciful All-Father
  Left a Hope to sooth her there.

Second Girl.

When the maiden Mary lifted
  Eyes surprised but not afraid,
And serene in holy courage
  Answered what the angel said;

Heard the voice that crowned her meekness,
  Of all women hailed the chief,
Knew her future, sad as wondrous,
  Guessed the glory and the grief;

What then filled her eyes' dark beauty
  With heroic thought and might?
'T was her Hope to give the nations
  Christ, their everlasting Light.

OUTLINE OF PANTOMIME CHARADE.

(SNUFFERS.)

Scene I. — SNUFF.

Two old ladies in ancient dress call upon another old lady; are gladly welcomed, offered a seat, which they take, after removing bonnets and shawls. Then, as they knit and nod and smile, as in earnest conversation, first one and then another, with an interval between, produces her snuff-box, which she raps on the cover after the old-time custom, then removes the cover and passes the snuff to others; all partake, using their handkerchiefs (colored ones are best) freely.

Scene II. — FERS (*furs*).

A pedlar displaying furs to several ladies. To make this lively, depends on the pedlar's ingenuity in acting his part forcibly — trying on the furs himself, and then putting them on the ladies; parading before the mirror, and at last appearing very nice to those who purchase, and shaking his fist, as he goes out, at those who do not.

Scene III. — SNUFFERS.

An old lady and gentleman sit by a table, on which burns a tallow candle with a long snuff; he reading a newspaper, and she knitting a sock. He looks up, and motions her to snuff the candle. She tries to do it with two knitting-needles, but fails; then she tries a hairpin from her own head, with no better success; whereupon the old gentleman impatiently attempts it with his fingers, but only succeeds in burning them. Then, while he blows upon his fingers and expresses great pain in a *strong* way, she rises, goes out, and returns with some snuffers, with which she snuffs the candle. —*E. O. P., in Good Times.*

THE RAIN.

(For Four Pupils.)

(*First Pupil.*)

"I wish it would rain," said Farmer Gray,
As he wiped the sweat from his brow away;
"The corn, potatoes, the grass and grain,
Would all be better for three days' rain.
If the drouth continues, the crops are spoiled,
And all my labor, my plans are foiled;
The springs are failing, the brooks run dry —
Well! there still is hope in the by-and-by."

(*Second Pupil.*)

"How I long for rain!" the maiden said,
As she tenderly watched by her brother's bed
"These lonely flowers that bloomed so fair,
The very sunbeams and heaven's own air,
Seem all polluted with heat and dust;"
And she closed the sash as a gentle gust,
Which might have carried relief and joy,
Brought only pain to the fevered boy.

(*Third Pupil.*)

"Kind Heaven, send rain, for the cloud of fire
From the forest rises higher and higher,
The brush is so dry, it is spreading fast,
And every moment may be our last;
Or our house, crop, cattle, and everything
May be consumed by the fire-king."
And the careworn immigrant bowed her head,
While a silent prayer in her heart she said.

(*Fourth Pupil.*)

At last it came! the refreshing rain —
And the wilted flowers revived again,
The glad birds sang, and the patient boy
In thankful murmurs expressed his joy;
The grain swelled out, the grasses waved,
And the hard-earned home in the woods was saved.
But the children murmured that rainy day,
Because they were kept from their outdoor play.

— *Kate Lawrence.*

THE STUDY OF SYNONYMS.

RANSOM AND REDEEM.

1. Both are derived from the Latin.
2. Both refer to buying back.
3. In its application, REDEEM is general and is used with regard to things or persons. Character, life, and honor may be REDEEMED.
   RANSOM is particular, and is only used with regard to persons, or their life, or liberty.
   We may REDEEM, not only by money, but also by care, by the expenditure of labor, and the like.
   We RANSOM only by money.
4. " Talk not of life or RANSOM, he replies;
   Patroclus dead, whoever meets me dies."
   " For no else, they said, but this could be,
   Their wrong-detained honor to REDEEM,
   Which true-bred blood should more than life esteem."

RARE AND SCARCE.

1. Both are derived from the Latin.
2. Both mean uncommon.
3. We call a thing RARE when few of the kind exist, or can be procured.
   We speak of a thing as SCARCE, which, though usually abundant, is for the time being to be had only in diminished quantities.
   In determining whether an article is RARE, we compare it with the existing quantity or number of some other article.
   In determining whether an article is SCARCE, we compare it with the former quantity or number of the same article.
4. " A perfect union of wit and judgment is one of the RAREST things in the world."
   " When any particular piece of money grew very SCARCE, it was often recoined by a succeeding emperor."

BIG, LARGE, AND GREAT.

1. The etymology of BIG is uncertain.
   GREAT is derived from the Anglo-Saxon.
   LARGE is derived from the Latin.
2. All three refer to size or number.
3. BIG expresses such size as gives the impression of burdensomeness or bulk, and carries the idea of physical turgidity and rotundity, as well as size.
   BIG and LARGE express the existence of relative or comparative but not actual size. GREAT implies some degree of actual size. We may say an insect is not so *big* (or *large*) as a fly, but we cannot use *great* in this sense.

BIG refers to bulk, GREAT to extent, and LARGE to width or capacity. A BIG building is made of a great mass of material, a GREAT building is lofty, wide, and extensive, and a LARGE building would hold a great number of persons or a great quantity of goods.

We do not say a BIG number of persons. Greatness of circumference makes things BIG. GREAT is used in a degree in which LARGE could not be so well used; as, He was LARGELY rewarded.

BIG is always physical, except when used in metaphor. GREAT is always moral. LARGE is physical when employed directly of persons, but may be used morally of qualities. A LARGE man is tall, broad, and heavy; a BIG man is excessively or irregularly large; a GREAT man is so by reason of his talents or energy, or perhaps only by station and the accident of birth.

Number, quantity, and extent are represented as LARGE. Power, knowledge, strength, wisdom, and such abstract qualities, with their opposites, as ignorance, weakness, and folly, are GREAT.

4. "His eye being BIG with tears."

"GREATNESS of soul is more necessary to make a GREAT man than the favor of the monarch and the blazonry of the herald, and GREATNESS of soul is to be acquired by converse with the heroes of antiquity, not the fighting heroes only, but the moral heroes."

"Such as made Sheba's curious queen resort
To the LARGE-hearted Hebrew's famous court."

EXAMINATION QUESTIONS.

Selected from those given at Milford, Mass., December, 1887, to Grades III, IV, and V.

[At the head of each sheet of paper write your name, the date, and the subject of this examination. Place before the answer the same figures that are before the question During examination, ask no question about it.]

LANGUAGE.

GRADE III.

1. What is the complete subject of a sentence?
2. Copy the following, and underline the complete subjects : —

Three companies of soldiers were captured.
Many beautiful presents will be given.

3. Write two sentences, each containing a noun in the possessive form.
4. In the following sentences change the italicized words into phrases.

The man advanced *eagerly*.
Then there were no railroads.

5. Define analysis, synthesis.
6. Combine the following statements into a well-constructed simple sentence : —

The boy wrote.
He was a good boy.
He wrote a letter.
He wrote to his father.
He wrote from school.

7. Define transitive verb. Predicate adjective.

8. Write a simple sentence with the subject modified by two adjectives and one adjective phrase.

9. Write a simple sentence with the predicate verb modified by an adverbial phrase.

10. Write a simple sentence with the predicate verb completed by a predicate adjective.

GRADE IV.

1. What is a transitive verb? Fill the following blanks with transitive verbs.

The horse —— the load. The farmer —— the corn.
The child —— the ball.

2. Supply commas where they are needed.

The name of everything that we see, hear, smell, taste or touch, is a noun.

3. Copy the following sentences and draw one line under each limiting adjective, and two lines under each descriptive adjective.

That fine, large, red apple grew in my orchard.

This beautiful doll, dressed in the blue silk, was a present from my mother.

4. What class of words do adverbs limit?

Add adverbs to the following sentences: —

The horse trots ——.
The ball rolls ——.

5. Name each part of speech in the following sentence: —

The dog and the child played prettily on the green lawn.

6. Correct errors in the use of the capitals.

Washington is the capital of the united states.

Burgoyne was the general in command of the british forces at saratoga.

7. Unite the following statements in a simple sentence: —

A man called at my door.
He was poor.
He was lame.
He was ragged.
He asked for bread.

8. Write sentences using the following abbreviations: —

A. M. U. S.

9. Write a sentence containing a proper adjective.

10. Write a sentence containing a noun, a descriptive adjective, an intransitive verb, and an adverb.

SPELLING.

GRADE III.

1. Emma left her parcel and her umbrella at the opera.

2. The rascal who made the assault gave a paltry excuse.

3. As the pastor rode slowly by the castle, he saw a large mastiff on the lawn.

4. If he cannot advance and give the password, do not scruple to arrest him.

5. Our granite quarries may be worked with considerable profit.

GRADE IV.

1. The patient teacher taught the scholars to multiply.

2. The carpenter strikes blows with his mallet, on the head of the chisel.
3. My cousin and my niece will be here in January.
4. The grocer filled the bundle with chestnuts and raisins.
5. The teacup, saucer, and napkin were on the table in the kitchen.

SPELLING AND LANGUAGE.

GRADE V.

Fields.
Friend.
Sauce.
Quietly.
Squirrel.
Christmas.
Chicken.
Because.
Answer.
Faithful.

DIRECTIONS: — Teachers will pronounce the words, and the pupils will write them in sentences.

Selected from Questions given at Lawrence-street School, Newark, N. J., December, 1887.

HISTORY.

GRADE I. — GRAMMAR DEPARTMENT.

1. Give an account of Washington's life from the time of his inauguration, noticing his most important official acts.

Give your estimate of his character.

2. Write upon the following topics: —
   (*a*) The right of search and its results.
   (*b*) Harrison's campaign in the war of 1812.
3. Take as a topic, "The annexation of Texas and its results."
4. Give an account of the discovery of gold in California and its settlement.

NOTE. — Use not to exceed 15 lines for each topic.

GEOGRAPHY.

GRADE I. — GRAMMAR DEPARTMENT.

1. In a paragraph of from 15 to 20 lines describe Egypt as to its boundaries, great rivers, government, chief cities, chief productions and exports, principal occupations of the people.

2. Draw a simple outline of the continents of Asia and Africa, and compare the continents as to form, surface, advantages for habitation, commerce, and the wants of man.

3. In what part of Asia would you rather live if you were obliged to reside there? Give your reasons for your choice. What large cities, mountains, and rivers would be near your selected home?

BOOK NOTICES.

GRUBÉ'S METHOD OF TEACHING ARITHMETIC. Explained and illustrated. Also the improvements upon the method made by the followers of Grubé in Germany. By Levi Seeley, A.M., PH.D. (Leipsic). New York and Chicago: E. L. Kellogg & Co.

Elementary teaching of number should proceed from observation, or better, it should proceed from things, since nearly all the knowledge obtained by the child in its earlier years is by means of the senses. This method teaches in this way, dwelling for the first year upon the numbers from 1 to 10, and progressing gradually and naturally according to the ability of the child. If the teacher rightly uses this valuable work it will develop and train the attention of the pupil, forming the habit of close concentration, and will serve as an excellent language lesson. The method adopted in this system is that of teaching one number at a time and developing the four simple processes of arithmetic at once. The plan is to use objects until the child is brought to see the relations of numbers and is thus able to reproduce the relations without the objects.

THE NEW PRACTICAL ARITHMETIC. By Waite A. Shoemaker and Isabel Lawrence, of the State Normal School, St. Cloud, Minn., under the direction of D. L. Kiehle, A.M., Superintendent of Public Instruction, Minnesota. New York: D. Appleton & Co. 1888.

This book is in reality, as well as in name, a practical arithmetic. It is designed for use in grammar and high school grades. The chapters on "ten," "twenty," "one hundred," and "one thousand" are of particular value. This part of the book is original in design, and will prove by practical use to be an advance on the ordinary methods of teaching. The pupil who has rightly studied these lessons will be able to follow directions, to detect the real thought which lies behind all arithmetical symbols and forms of expression; will understand the difference between multiplier and multiplicand, divisor and quotient; will have the ability to state the solution of a problem in clear and accurate language; will have achieved rapidity and accuracy in handling the smaller numbers, and will have become so well acquainted with the main applications of arithmetic as to be able to solve the problems and explain them, even though they be put in a new form. Each new topic is introduced by a full development of the subject, so that the pupil may prepare the work without depending upon the teacher. The arrangement as given in the table of contents will be found of great value to the teacher who wishes to have the class review certain subjects. The work is one by which the pupils learn the reasons for the various operations they perform.

RIVERSIDE LITERATURE SERIES. No. 33. TALES OF A WAYSIDE INN. By Henry W. Longfellow. With an introduction and notes. In three parts. Part I. No. 34. Part II. No. 35. Part III No. 36. SHARP EYES AND OTHER PAPERS. By John Burroughs. Boston and New York: Houghton, Mifflin & Co. Single numbers, 15 cents. Yearly subscription (9 numbers), $1.25.

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THE DIVINITY OF TEACHERS.

BY M. B. KERR.

IF, as has been alleged, the "office maketh man," then in a much truer sense that of the teacher is divine. One has only to go back to the experience of his own childish days to remember with what a sense of revelation from on high, as, indeed, it was, the person and offices of one's first teachers inspired him. I have in mind now one of my first teachers who, when I was at the impressionable and keenly sensitive age of eight, was to me an object of reverent observation. My child's instinct told me she was conscientious, and it also told me something else, which taught and influenced me more than all her love. It was that there dwelt with her an ever-abiding sadness, that seemed all the more apparent for the frequent gleams of humor which played upon the surface.

It was my first experience of the "bands of love and service that bound me to the world's sad heart" — the universal heritage of all who exist, and who would share its joy. The influence of this subtle atmosphere taught me more than many words; it seemed the prophetic glimpse of my own coming existence; yet, it I loved, too, if in living it I might come nearer the personality I adored. Though far removed from her in years, I yet realized the nearness of our divine humanity in common, and felt the assurance that what she had done and suffered I could even do also. She was, indeed, a revelation of religion to me at that tender age when human mediators are necessary, — as, indeed, when are they not?

And yet how unconsciously was all this influence exerted by the author of it, but none the less effectively; indeed, even more so, as the unconscious is ever the true, the strong. Had it been an influence otherwise, the drift would have been just as strong, the responsibility as great.

It is a mistake to suppose that because a child has numbered so few years it is not already solving the problem of life. As soon as consciousness begins its work there must be the materials to work upon. How important, then, that they should be of the best! And chief and richest among these materials are the personalities of those who surround its daily life. The father, mother, teacher are watched by eager, devouring eyes; no subtle detail escapes, but is all faithfully noted by the hungry young reporter, for he reports for a voracious master, — no less than his own life-book. Good, bad, indifferent, it all goes down, and not eternity can alter the score. Personal influence is as wide as the infinite itself; the impetus great beyond computation. Even at this day I well remember what power thrilled through my veins on my teacher saying once that as another had overcome so could we. It seemed a promise that as she, I felt, had overcome, so one day should I, and as a knight who receives the sword-stroke, I felt thrice armed for life.

In this, as everywhere in life, love is the prime lever, as in the case of this teacher of my childhood. Her approbation was as a divine seal to me; her condemnation awful, not to be contemplated; yet had I not loved her she could not have influenced me. It was in the common name of that love, whose name is also divinity, she moved and wrought so well. Teachers, then, realize your divinity, your responsibility as mediators between your God and man. Live purely, that you may show purely in the eyes of these little ones, that not the least of them may be offended.

Drawing is the lesson of things which constitute nearly the whole action of human experience. MACARTHUR.

THE HISTORY OF OUR COUNTRY: HOW TO TEACH IT.[1]

VII.

LOCAL HISTORY FOR PRIMARY CLASSES.

BY NINA MOORE, AUTHOR OF "PILGRIMS AND PURITANS."

CHILDREN love true stories. They like to know what happened to their fathers and grandfathers, to their neighbors, or to the town in which they live.

This personal interest in the immediate past, or in the remoter past of what lies close about them, is the foundation of a broader interest in historic events. Most schools for young children wisely leave national history untouched; but with some teachers local history is deservedly creeping into favor.

Every place, from London to Poker Flat, has some romance of its own, some reason for existing, some point at which it has felt its connection with the current of national life; and though children of the older States have an advantage in living where the town history and the national history meet, any child in any section of the country can be led through lessons and talks about his own neighborhood to stories of the nearest place of importance and thence to a knowledge of a few leading men and the main events of the three epochs of United States History.

It would be pleasant and profitable if teachers of local history in different parts of the Union would compare notes and exchange experiences. For example's sake, here is an account of what has been done by some Massachusetts children; may it be followed by reports from Virginia, New York, Ohio, and so on, to California.

Beginning with a class of Boston children, most of whom were about six years old, my first care was to quicken imagination by comparing their present surroundings with those which existed for the first settlers of Boston more than two hundred and fifty years ago. In trying to do this, I found myself teaching them to understand and delight in historical maps. The talk ran thus: —

"What street are we on?"

---

[1] Copyright, 1888, by William A. Mowry.

"Marlborough Street."

"Could any one draw, on the board, a picture of Marlborough Street? All might try it."

I tried it. My picture was merely two close parallel lines.

"Could any one make a picture of our schoolhouse, on Marlborough Street?"

At the age of six, an artist is seldom daunted by any difficulties, and I soon had houses of all dimensions overtopping the streets. I explained, that since our picture of the street was very small, the picture of the house must be so small as not to be like a picture at all, and placed a minute square or oblong on my own diagram to represent the building. They accepted the idea, and modified their drawings.

"Now suppose it were recess-time. The children would run down stairs, out of the door, into the street, and off to the——"

"Public Garden!"

"Could any one draw the Public Garden?"

Remarkable gardens, most of them round, appeared on the blackboard. We discussed the shape of the garden. I drew it, they erased their attempts and copied mine. Our first map was complete, and when the children had taken their seats, I asked them if they supposed the garden had always been there, and told them of the time when all that we had drawn was covered by the Charles River, and how people had gradually made solid land of the mud flats. A part of the land which is now the Public Garden was once used as a circus-ground. The circus building was afterwards made into a conservatory, where people might go and enjoy the flowers; and at last a large piece of the ugly stretch of gravel was covered with loam and laid out in paths and beds, finally growing to be what we find it today. Did they know of any waste land that was used for a circus-ground, now? Perhaps that land would be turned into a park, or garden, or into lots for beautiful buildings like the Art Museum, some day. Perhaps they might be able, sometime, to help make the city pleasant and healthful.

With colored crayons, the children then made their Marlborough Streets brown, and their Public Gardens green, to remind them of the green grass there, and the half hour was gone.

In the next lesson the maps were drawn again, the story retold by me and repeated by the children, each trying to give the whole without being prompted by the rest, and then we were ready to add to our map Commonwealth Avenue and the adjacent streets.

Had the school been in a different part of the city, I should have selected different points to start from. As it was, the river, with which all were familiar, made it easy for me to show them the curvings of the shore and speak of the wharves fringing the northern and eastern sides of the town.

Each child was next furnished with an outlined map of Boston, blank, save for the details mentioned in the lessons, and each was allowed to trace upon a piece of thin paper, pinned securely over the copy, everything that he could recognize. All were eager to show upon their tracings the position of their own homes, and to explain the routes by which they found their way to school; and their tracings, afterwards colored by the children, proved of much value then, and later, too.

Having finished the story of the Public Garden, I was ready to tell them about the Common, so that, also, was given a place upon the maps. The first owners of the Common, and of all that part of Boston not flooded by the Charles, were the Indians. A talk about the Indians ensued, and a map was drawn upon the board, showing Boston before it was named Boston; when it went by the Indian name of Shawmut. There was no Marlborough Street then, no Public Garden,—I sketched them faintly in the bed of the river,—but the Common was high and dry, and covered with flowers and blueberry bushes.

The children next prepared an outline map of Shawmut, as they had prepared that of Boston, postponing the coloring of it until the end of the year, that they might the more easily make changes in it as my stories went on.

After briefly touching upon the coming of the Northmen, and the discoveries of Columbus,—briefly, because Boston cannot claim these voyagers as her exclusive property, however much she might like to do so,—the first white settler of Boston, and owner of the Common was introduced. This was William Blackstone.

Now the story of William Blackstone is of no importance to students of American History; but I can answer for its immense value in giving Boston children an idea of the utter loneliness and wildness of this region before the tide of immigration set in. It is of far more consequence to them as a stimulus to the historical imagination than lives of much more famous men, simply because it stands in strong contrast to any experience of the present day, and yet concerns the same hills, and river, and ocean, that the children see constantly before them. It makes history real.

And so, while larger events were merely referred to, the doings of this obscure hermit were minutely scanned. His surroundings were carefully described, his character was critically surmised. Only one or two fresh incidents were given in each lesson, for the children were required, or rather permitted, to relate in turn all they had been told of Mr. Blackstone's staid adventures before hearing any more. The effect of this repetition upon the speech and memory of the children was one of the best results obtained.

In connection with the Blackstone lessons we constructed another map,—Boston as it was in Mr. Blackstone's time. I showed the class, on the blackboard, how the river and harbor originally washed the marshy shores, and they outlined "Old Boston" with much appreciation of the change.

The Winthrop story followed that of William Blackstone[1]; the two together, in addition to the map-tracing, extending through most of the first year,—occupying half an hour of each week.

As the Winthrop settlement progressed, its doings were recorded on the map. A fort on Fort Hill, a windmill on Copp's Hill, etc., etc., told of the improvements made by the early colonists. Whenever a picture relating to the time of settlement could be found, it was taken to the classroom, and several excursions about the city helped fix the localities in the children's minds. We went to the top of Beacon Hill, climbed the stairs to the cupola of the State House and saw the city spread like a map below us. We imagined the houses all swept away, green grass and trees growing there instead, hills rising near us, and the river flowing over the new land, while on the hillside was only William Blackstone's cottage, and by the seashore Winthrop's tiny village. Descending, we walked down Pinckney Street which carried us to Blackstone's Point, and proceeded thence, over the new land, back to the school.

At another time we went to the Old South Church, which stands on what was Winthrop's garden. Seating ourselves comfortably for a good talk, we fancied the walls away, and the Governor's shade-trees above our heads. About here, we thought, the Indian chiefs waited upon Governor Winthrop. Yonder, perhaps, beside the house, stood the wood-pile from which the needy man stole logs until cured of his stealing by Winthrop's telling him to supply himself freely; and where the two little girls so narrowly escaped being crushed by the falling wood.

---

[1] See the Memorial History of Boston or reference given in Pilgrims and Puritans, for these biographies.

Lest this method should seem like much labor expended for a small result, it is necessary to remember that the result desired is by no means the accumulation of facts and the comprehension of the relative value of events. The result to be looked for is a definite, deep impression, given and *grown in*, of a few leading traits and incidents of the men and times chosen for study.

In the next year these same children were able to advance more rapidly. They listened to stories of the Revolutionary period, and stories of the Anti-slavery days, repeating them with care and constantly using the map in describing the actions of their heroes.

In the third and fourth years they began to read about England, and Plymouth, and Boston, reviewing the ground covered by the stories, and taking a wider range. But these readings, and the stories of the Revolutionary and Anti-slavery periods must wait to be spoken of in another chapter.

METHODS IN GEOGRAPHY.[1]

BY LARKIN DUNTON, LL. D., AND MISS L. T. MOSES.

3-2-8

XI.

NATURE LESSONS — SECOND YEAR.

THE observations of the first year are repeated the second year with more attention to detail; and in some cases other things are observed in connection with the subject studied. This year the observations are made more with reference to comparison than they were the first year. There are also certain obvious relations between the phenomena observed, which should be noticed this year; as, for example, the relation between an east wind and rain, between long sunshine and heat, and other simple and obvious relations of cause and effect.

In order that the children may compare a present with a past men

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[1] Copyright, 1888, by Larkin Dunton and L. T. Moses.

tal image, the power of seeing accurately and of representing the thing seen vividly must be strengthened. While the work of the first year was directed mainly to the cultivation of the power of seeing, the power of representing the things seen was not neglected. This year we still direct our efforts to the improvement of the power of seeing accurately; but great attention should also be given to increasing the power of vivid representation in the children's minds. The method of doing this will be shown in the following lessons.

The power of knowing relations between objects will come as a direct result of clearly seeing and vividly representing objects in their relations. The cultivation of this power in the minds of the children will be of secondary importance in this year's work. It should be used, as the representation was the first year, with reference to the subsequent year's work, and a preparation for it.

The order of the lessons should be in the main as in the previous year's work. For the lesson on clouds a suitable day is chosen, and the children are sent to the windows, or out of doors, for observation; and the color, size, form, and movement are treated as last year, but with more attention to detail in seeing and describing them.

The children are again sent to observe. This time it is to see some particular cloud, which the teacher has pointed out to them. Teacher and pupils observe together. All return to their seats, and the teacher says, "I can see the cloud here with my eyes shut, just as well as I can at the window looking at it. You may all shut your eyes, and try to see the cloud." After a few moments she says, "Now open your eyes. How many of you can see the cloud as well when you are not looking at it as when you are? You all think you can; I will see whether you can or not. How many of you can tell me just where the very darkest part of the cloud is?" The children's answers to this and other similar questions will test the accuracy of their mental picture, which should, when not clear, be made so by another look at the cloud.

When the question test shows that the pupils have seen so far correctly, they should be directed to draw the outline of the cloud. This attempt will show that most of the pupils need to look again; and some common error criticised wisely by the teacher will create a lively desire on the part of all to look once more. When this is done, the children again close their eyes and try to see the cloud. When they have done this, they are asked whether they saw the cloud more clearly the last time they shut their eyes than the first time. They all agree in the greater clearness of this vision, and show that they are right by a second drawing.

The teacher now asks the pupils to think of some things they see more clearly now than they did at first. One says, "I see better the dark bluish slate color at the bottom of the cloud." Another thinks he sees more clearly that the lower edge of the cloud is more nearly straight than the upper edge. On inquiry, all see that better than before. An eager child tells that he sees the soft, fleecy, piled-up look better; still another, with an eye to color, says he noticed that there were three or four thicknesses of white piled up on the upper edge, and that it grew darker all the way to the bottom, where it was very dark. This suggests to some child that the top edge was scalloped and was pretty.

The teacher thinks the cloud is rather beautiful than pretty. Indeed, she selected that particular cloud, because she thought it so wonderfully beautiful. She would like to have the children think of its beauty a moment. She has rarely seen a more beautiful cloud; but last night, or at some other stated time, she did see one even more beautiful than this one. And because it is possible to see even more beautiful clouds, she wants the children to look every day till one of greater beauty is found. But as it may be several days before there is another cloud more beautiful than this, she wants the children to shut their eyes a few times every day and see this cloud; so that, finally, when they do see a more wonderfully beautiful cloud they can tell her, even if she does not see it herself, just how it is finer than the one they have seen today.

Exercises of this kind, it will be readily seen, increase greatly the power of representation in the child. It is better, in the comparisons to be made, to look forward to future observations, as suggested in the foregoing exercise, than to use their past observations; although the latter may occasionally be allowed, if the thing observed was very impressive.

It is well also to keep before the children's minds the exceeding beauty of the natural object they are observing.

While studying the special cloud, the children generally observed that it was more nearly straight on the lower side than on the other sides, and that it was there darker in color. It will be profitable to have them now observe the other clouds in the sky to see if they too have these peculiarities. When they have decided in this matter for today, it will be well to lead them to want to observe whether the same is true on other days. In this way they will soon learn the facts on which the theories of science in regard to this matter are founded.

The observations of the movements of the clouds this year are to establish the relation of their movements with the wind. Of course the children will observe, in this connection, that clouds sometimes move in opposite directions at the same time. When this is seen, the different colors, rate of motion, form, and height of the two kinds of clouds should be carefully observed, and the different directions of the wind at different heights may be inferred. Of course, this is all to be done at the time of the lesson; although, before a suitable day for this sort of work comes, the children may have observed the different movements at home.

The children may begin this year to predict, from the appearance, growth, and movement of the clouds, fair or foul weather, and to observe the conditions for and to predict fine sunsets, which they delight to watch. How well the writer remembers the delight of a little boy of seven when he saw a fine sunset which his teacher missed; for, during the year in which they observed the beauty of nature together, he did not miss one sunset, so great was his enthusiasm for and love of the beauty of the heavens.

The various analogies which the children see between the clouds and the other beautiful things of nature and art should be brought out at this stage of the lessons. The analogies of the last year may be repeated, if the children care for them; and such others may be added as come naturally from their wider experience of things and better knowledge of the words which express them. It will be well for the teacher to suggest and picture any things to which clouds are likened in the poem she means to read at the close of the lesson. "Cloudland," a little poem by M. N. Prescott, found in most children's readers, delights children of this age. Should that poem be chosen, the third stanza would need to have the words casements, turrets, and battlement explained. This could best be done by a picture showing those parts of a ruined castle, which the teacher has previously drawn on the blackboard.

In this and all cases where the teacher wishes to make it possible for the pupils to image things from words, it is well to have the pupils themselves see the analogy from her words and the pictures she draws. If the children, from the mental picture they have formed of a ruined castle, see that clouds sometimes look like it; and if the casements, turrets, and battlements of the castle are clearly defined in their minds, they will be delighted to find the poet has had the same thoughts that they have had; and when the teacher reads, —

"Now a castle rises there,
  Broken casements, turrets rent;
Here a piece of crazy stair,
  Or a ruined battlement,"

they will have no trouble in making the appropriate pictures.

With the exception of helping the children to understand the poem to be read at the close of the lesson, it is well not to force them to see likenesses. They will naturally like those they see, and will be sufficiently active in this way, if their efforts are appreciated by the teacher.

The use of the clouds in storing the rain and sending it down to refresh the thirsty earth, the plants, and all living creatures; the use in giving us protection from the great heat of the sun; and in making us happy by their great and varied beauty will be much more real to the children this year than these various benefits were last year; and much more readily will their little hearts rise in gratitude to the Giver of all this good and beauty.

At the close of the lessons the teacher reviews the things the pupils have seen and thought about during the lesson; they tell her what they are to look for in the future, and she reads to them some poem suited to their comprehension. Should they already know the one referred to above, the following, by Louisa E. Humphrey, will help them to see and love the beauty of the clouds: —

A CLOUDLET.

"O beautiful fleecy cloudlet
  That floats in the sky above,
Come down and whisper your secret
  To the children that you love!

"O tell us from whence thou comest,
  And whither thou goest away!

What makes thy wondrous beauty
  And thy silver lining,—pray?"

Then the beautiful fleecy cloudlet
  Quite lowly bent her head;
And sent a messenger rain-drop,
  Who to the children said:

"I am the breath of the angels
  Who from their warm, bright home,
Bear to Heaven the children
  When Our Father bids them come.

"And my beautiful silver lining
  Is the light from the pearly gate;
It is always open to children,
  They need never stand and wait."

PRACTICAL METHODS OF TEACHING SPELLING.[1]

BY ANNA B. BADLAM,

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GRADED LESSONS FOR ORAL AND WRITTEN SPELLING.

General Direction.—1. Have each word pronounced, sounded, and spelled. 2. Have each word used in a sentence. 3. Have each word copied upon the slate. 4. Keep a list of the sentences which have been used orally and write them upon the board for a reading lesson later in the day; have these sentences copied upon the slate. 5. Use these same sentences for dictation exercises at the end of the week.

Lesson 1. The initial letter changes. *A* short.

cat	*mat*	*sat*	*rat*
fat	*hat*	*bat*	*pat*

Lesson 2. The final letter changes.

1.

cat	*mat*	*rat*	*hat*
can	*man*	*ran*	*has*
cap	*map*	*rap*	*had*

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[1] Copyright, 1888, by Anna B. Badlam.

2.

fat	*sat*	*bat*	*pat*
fan	*sad*	*bad*	*pan*

Lesson 3. The middle letter changes to *e*, *i*, *o*, or *u* short.

1.

cat	*mat*	*rat*	*hat*
cut	*met*	*rut*	*hit*

2.

cap	*man*	*ran*	*has*
cup	*men*	*run*	*his*

3.

fat	*sat*	*fan*	*had*
fit	*sit*	*fun*	*hid*
——	*set*	*fin*	*hod*

4.

sad	*bat*	*bad*	*pan*
sod	*bit*	*bid*	*pin*
——	*but*	*bed*	*pen*

Lesson 4. The silent letter. *A* short; *A* long.

fat	*mat*	*rat*	*hat*
fate	*mate*	*rate*	*hate*

Lesson 5. The silent letter. *A* short; *A* long.

can	*cap*	*man*	*pan*
cane	*cape*	*mane*	*pane*

Lesson 6. The silent letter. *U* short; *U* long. *I* short; *I* long.

cut hid bit pin

cute hide bite pine

Lesson 7. The initial letter changes. *E* short.

net set wet yet

met let pet jet

Lesson 8. The final letter changes.

1.

net met set let

neck men sell leg

2.

wet pet yet jet

web peg yes —

Lesson 9. The middle letter changes to *i*, *o*, *u*, or *a* short.

1.

net set leg sell

nut sit log sill

2.

pet peg men met

pit pug man mat

Lesson 10. The initial letter changes. *I* short.

pit fit bit kit

sit hit wit quit

Lesson 11. The final letter changes.

1.

pit fit hit bit
pig fig hill bill

2.

wit quit kit sit
will quill kill sick

Lesson 12. The middle letter changes to *a*, *e*, *o*, or *u* short.

1.

pit pig fig hit
pot peg fog hot

2.

bit will sit sick
but well set sack

Lesson 13. The initial letter changes. *O* short.

hot lot dot pot
not got cot tot.

Lesson 14. The final letter changes.

1.

hot not dot cot
hod nod doll cod

2.

pot tot lot got
pod top lock God

Lesson 15. The middle letter changes to *a*, *e*, *i*, or *u* short.

1.

hot	hod	doll	pot
hut	had	dull	pit

2.

pod	top	lock	got
pad	tip	luck	get

Lesson 16. The initial letter changes. *U* short.

nut	cut	rut	——
but	hut	shut	——

Lesson 17. The final letter changes.

1.

nut	but	cut	hut
nun	bug	cub	hug

2.

rut	shut	——	——
rub	shot	——	——

Lesson 18. The middle letter changes to *a*, *e*, *i*, or *u* short.

1.

nut	but	cut	hut
not	bit	cot	hot

2.

bug	cub	hug	rub
bag	cab	hog	rob

Lesson 19. The silent letter. *I* short; *I* long. *U* short; *U* long. *O* short; *O* long.

bit	cut	cub	rob
bite	cute	cube	robe

Lesson 20. The silent letter. *O* short; *O* long. *A* short; *A* long; *I* short; *I* long. *U* short; *U* long.

1.

rod	tap	win	fin
rode	tape	wine	fine

2.

hug	kit	dot	not
huge†	kite	dote	note

† Change of sound.

3.

rag	quit	sit	met
rage†	quite	site	mete

† Change of sound.

Lesson 21. The silent letter — exceptions to the rule.

live	have	some‡	done
give	bade	come	none

‡ O = U short.

It must not suffice simply to think that such or such information will be useful in after life, or that this kind of knowledge is of more practical value than that; but we must seek out some process of estimating their respective value, so that as far as possible we may positively know which are most deserving of attention.

SPENCER.

COUNTRY SCHOOLS.[1]

BY SUPT. J. G. EDGERLY, FITCHBURG, MASS.

II.

A FREQUENT change of teachers in these schools is inevitable, hence a new incumbent should endeavor to ascertain what methods have been pursued previously. Some of these methods may be adopted, others must be discarded. There should be an individuality to each school, no matter what course of study is prescribed, or who supervises the educational interests of the town.

The transition, however, from the methods of one teacher to another must not be too abrupt. The changes that are desirable should be made in such a manner that the efforts of former teachers are not disparaged. Similar difficulties will be encountered by the different teachers, and the efficiency of many schools has been impaired on account of the failure to recognize this fact. It may be prejudice on the part of pupils and parents, but if such prejudice is ignored the new teacher fails to receive that support which is essential to his success. The teacher with little experience is quite likely to follow the methods that were in vogue in the schools he attended, and the degree of respect that is felt for a former instructor influences him in such efforts. Circumstances may be different, but the beginner can hardly be expected to realize this, considering the manifold duties that press upon him in his new field of labor. There is little to guide one, in many cases at least, beyond the recollection of the manner in which former teachers were accustomed to manage. This is a powerful influence in all schools.

The number of classes must of necessity be large, and the organization of a school under such circumstances is a subject requiring careful thought. There were at least twenty-five recitations daily in the district schools that the writer attended, and also in those subsequently intrusted to his charge. The number

[1] Copyright, 1888, by Eastern Educational Bureau.

at times exceeded this. The importance of an attempt to reduce the number did not occur to him. The teachers in such schools today doubtless find a similar state of affairs, and it may be that they can profitably study this feature of school organization. Then the youngest children stood in front of the teacher, who pointed with the blade of his knife to the different letters and said: "What is that?" The response came "A," "B," "C," etc. A few minutes each day — not more than ten or fifteen — were all that could be spared for the little ones; the remaining time they were left to themselves, the teacher frequently requesting them to be quiet.

Scholars should be taught how to use the time not spent in reciting to the best advantage, and the young teacher must make this matter a careful study. Time must be economized; recitations should follow one another in rapid succession, and the daily program be familiar to all. The teacher ought not to be obliged to say at the close of a recitation to those who are old enough to learn their lessons, "Now you may take your geographies and study the chapter on Brazil; or "The class in the Third Reader may prepare the lesson now." Such directions are needless. The pupils should set themselves at work, and the importance of doing so should be impressed upon their minds. Definiteness of purpose on the part of the teacher inspires the pupils with like determination.

Having called attention to the need of method in the employment of the time not needed for class exercises, let us consider what we term recitations.

The method of conducting recitations is an important subject. It becomes especially so to the teacher of a district school, who is compelled to pass rapidly from one exercise to another. In this connection, it is necessary to take into account the work of the class in recitation and also the preparation for it. The time allotted to each recitation is short, and for this reason teacher and pupils must make careful preparation. Let us, as far as possible, avoid the delays that are likely to occur. A certain signal is sufficient to call the class. There is no need of repeating each forenoon, "The second class in Arithmetic will recite next," together with several other admonitions. Special stress is laid upon some of these points that may seem trivial, but those who realize from experience the fact that time has been wasted in this way, feel that young teachers need to be cautioned concerning this practice. Do not say to a class every day, "Books closed." It is presumed that this is understood, that the pupils are not expected to recite with their books open. Time is lost when we accustom ourselves, or allow ourselves to use these unnecessary cautions.

We tire of hearing the clergyman repeat the number of the hymn several times. We attend a concert where each person is supplied with a printed program; is there any reason why the manager should announce each selection in turn? We attend the graduating exercises of a high or a normal school, and each person present has a printed program; is there any reason why the principal of the school should take the time to adjust his spectacles carefully and read the name of each essayist and announce his subject? Not unfrequently a half hour is consumed in this manner, and at times when people are anxious for the exercises to draw to a close. We sometimes teach too much by example; we must learn to economize time.

Suppose twenty-five minutes is allotted for a writing or a drawing exercise; can we afford to spend eight or ten minutes in distributing the books and the same amount of time in collecting them? Some teachers advocate this method and their practice corresponds with it; others can distribute the books in forty-five seconds. Under ordinary circumstances any class should be in readiness to recite within one minute from the time at which the first signal is given.

After the class is ready to recite, how shall we proceed? Do not ask where the lesson is, that is, do not inquire for information. The teacher who says, virtually, to the class, "I do not know where the lesson is, will you please inform me?" places himself in an awkward position. Anything that gives pupils to understand that the teacher is not familiar with the lesson tends to weaken their confidence in him. If one pupil says that the teacher the previous day gave certain directions regarding the lesson, and another one says that other directions were given, and the teacher does not feel quite sure what he did say, he loses ground. Even the young scholars learn to "read a teacher." Our manner before the class has much to do with its progress. The way in which a question is asked, a statement made, or an explanation given, has its effect. Two teachers may illustrate the same point, using the same words in the illustration; the pupils will be interested in the efforts of the one, while the words of the other make very little impression. We need to cultivate our power of expression. We cannot overestimate the importance of this. Nothing impresses a class more than positiveness, and we are the most positive when we give the fewest cautions, use the least number of words consistent with a clear explanation, and utter those words in a positive tone of voice. It has been well said, that the object of study is not merely to prepare for recitation, but that the object of recitation is to prepare for study. The pupils must, in the recitation, obtain suggestions that will aid them in their study.

"Busy work" is now a prominent feature in our best primary schools. It can be made valuable in the ungraded school. The little ones cannot be left to themselves for a long time. Work of some kind must be suggested from time to time, the teacher bearing in mind that it is important for these younger ones to learn as early as possible to plan work for themselves. They like the "busy work," but we cannot say to them, "Now busy yourselves about something"; suggestions from the teacher are needed. They may arrange blocks or sticks upon their desks. There is not much difficulty in securing material for this work. Spools, pegs, beans, corn can be obtained and utilized. Arithmetical cards, language tablets, and similar devices are now plenty. A few may be obtained by the district, the teacher must improvise others. There should be a great amount of writing upon slates, and paper, and in blank books. While one class is reciting, all the others can be engaged in some definite pursuit. The preparation for this requires time and thought on the part of the teacher, but the results will compensate.

THE trouble which so many teachers experience in getting pupils to understand arithmetic is not inherent in the subject itself, nor in the mental inability of pupils to comprehend it, except in rare instances, but is owing entirely to defective methods of instruction. GREENWOOD.

METHODS OF TEACHING ARITHMETIC IN PRIMARY SCHOOLS.[1]

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XVII.

NUMBERS FROM ONE TO A THOUSAND.

DEVELOPMENT OF NUMBERS TO A THOUSAND.

101 TO 200.

FOR the same reason that it was thought best for pupils to be made acquainted with numbers from eleven to twenty before studying numbers from twenty to one hundred, it is here recommended that they be made somewhat familiar with numbers from 101 to 200 before they are required to deal at all with numbers from 201 to 1,000. The following steps will bring the pupils to the desired result: —

1. Counting from 101 to 200.
2. Counting from 200 to 101.
3. Writing numbers from 101 to 200.
4. Reading numbers written on the board by the teacher.
5. Writing the numbers from dictation.
6. Separating the numbers from 101 to 200, into
    a. Hundreds, tens, and units, as, for example: —
        134=1 hundreds, 3 tens, and 4 units.
        150=1 " 5 " " 0 "
        105=1 " 0 " " 5 "
        200=2 " 0 " " 0 "
    b. Tens and units, as, for example: —
        134=13 tens, and 4 units.
        150=15 " " 0 "
        105=10 " " 5 "
        200=20 " " 0 "

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[1] Copyright, 1887, by Larkin Dunton.

If the work on numbers below one hundred has been thoroughly done, there will be need of but little objective teaching at this stage of the work. It would be well for the teacher to be provided with a few strings of one hundred buttons each, or a few bunches of sticks, each bunch containing one hundred; so that he can illustrate his work objectively, and afford an opportunity for the dull pupils to handle the objects themselves. But it is by no means necessary to present all the numbers at this stage of the work in the form of objects in the hands of every child. Too much objective teaching of numbers is only less stultifying than too little. It is now time to appeal to the imagination and to the power of abstraction.

201 TO 1,000.

The pupils should now be taught to count by hundreds to 1,000; then the numbers 201, etc., to 1,000 should be treated in the same way, and by the same steps as were recommended in the case of numbers from 101 to 200, including the separation of the numbers into hundreds, tens, and units, as shown above under *a* and *b*.

This work of counting, reading, writing, etc., should be continued till the pupils have clear ideas of all numbers below 1,000, know them as composed of units, tens, and hundreds, and know how their component parts are represented by figures. The test of this last item of knowledge is the ability of the pupil to select the groups of objects, and the single objects, for which the different figures of any number below 1,000 stand. When this test can be easily borne, it is time to advance to the different fundamental operations, but not before.

ADDITION.

The more thoroughly pupils are drilled in adding numbers expressed by two figures, that is, numbers below a hundred, the easier will be the work of learning the addition of numbers represented by three figures. Hence it is well at this point to make a thorough review of the addition of numbers below a hundred. For this purpose Chart XIII. will be found very convenient. If all numbers from eleven to one hundred are in turn added to each of the numbers on this chart, the pupils will have 90 times 100, or 9,000 examples; while the teacher will be spared the labor of copying any of them on the board. The following suggestions are offered as to the proper stages of the review here recommended.

Let the pupils add the numbers written below to each of the numbers on Chart XIII., proceeding from left to right: —

First Stage.	*a* 10,	*b* 20,	*c* 30,	*d* 40	- -	100.
Second "	11,	21,	31,	41	- -	91.
Third "	12,	22,	32,	42	- -	92.
Fourth "	13,	23,	33,	43	- -	93.
etc.	etc.	etc.	etc.	etc.		etc.

These exercises should, as far as possible, be performed orally; but, when necessary, the pupils may be required to indicate the work on their slates. Suppose it is required to add the number 47 to each of the numbers on Chart XIII., the work will appear on the slate in the following order: —

$1+47=48$
$12+47=59$
$26+47=73$
$34+47=81$
$47+47=94$
$53+47=100$
$67+47=114$
$76+47=123$
$84+47=131$
$96+47=143$
$2+47=49$
$19+47=66$
$22+47=69$
$31+47=78$
$43+47=90$
$52+47=99$
$70+47=117$
$73+47=120$
$87+47=134$
$93+47=140$
etc. etc. etc.

Or the pupils may be required to write the results only; when the results of the above additions would assume this form: —

	a.	*b.*	*c.*	*d.*	*e.*	*f.*	*g.*	*h.*	*i.*	*k.*
l.	48	59	73	81	94	100	114	123	131	143
m.	49	66	69	78	90	99	117	120	134	140
n.	etc., etc.									

It will be noticed that the numbers to be added first are those consisting of tens only, then those consisting of tens and units. In adding the latter class of numbers, the tens should be added first and then the units; for example: $95+47$; $95+40=135$; $135+7=142$; hence, $95+47=142$.

The pupils should acquire considerable facility in adding numbers of two places before proceeding to the addition of larger numbers. When they are prepared to advance to work with larger numbers, they should be assigned examples in the following order: —

a. Both numbers containing tens only, as, —

$40+30=\ 70.$
$80+70=150.$

b. One number containing tens and units, the other tens only; as,—

$45+30=\ 75.$
$48+60=108.$

c. Both numbers containing tens and units; as,—

$43+24=\ 67.$
$86+75=161.$

d. One number containing hundreds, tens, and units, and the other only tens and units, as,—

$238+46=284.$
$475+48=523.$

e. Both numbers containing hundreds, tens, and units, as,—

$425+248=673.$
$436+398=834.$

The above is the order in adding two numbers only; the addition of columns of numbers comes later. This work is all to be done mentally before any part of the result is written. In adding two numbers, the following rule is universally to be followed:

The first number is not to be separated into parts; when the second consists of tens and units, the tens are to be added first, then the units; when it consists of hundreds, tens, and units, the hundreds are to be added first, then the tens, and lastly the units, e. g.: —

$367+86$; $367+80=447$; $447+6=453$. $378+285$; $378+200=578$; $578+80=658$; $658+5=663$.

Only a few examples like the last should be given; and these mainly to the ablest pupils.

The pupils should have enough work like the above, on pure numbers, to make them familiar with the processes of addition; and then the knowledge and power thus gained should be applied to the solution of simple practical problems. Indeed, some practical problems should be given with almost every lesson.

EDITORIAL.

A YEAR and a half has been sufficient to demonstrate the success of *Common School Education.* It began in January, 1887, without a single subscriber. It now sends out regularly eight thousand copies, and will soon require a round ten thousand to mail monthly to its paid subscribers. Its efforts to furnish systematic instruction in the best methods of teaching the common school branches has met with a cordial response from the teachers of America. It pays a high price for its articles, which are printed in the best style of the art on the best magazine paper, and it can hardly be afforded at the low price at which it has hitherto been furnished. Many improvements are contemplated for the new volume, which will begin January, 1889, and in order to meet all necessary expenses thereby incurred, we desire a very large increase of our circulation. If every one of our present subscribers should send us one new name with the dollar, our list would be doubled at once, and a favor would be conferred upon the new subscriber.

It will be the aim of the editor and the publishers to give full value for the money received, to deal honorably, and to furnish the best and most useful professional journal for the common school teachers of this country possible. Their plans are well laid, and the changes, improvements, and enlargements will require a series of years to fully mature and carry into operation.

THE royal road on which a child travels in his pursuit after knowledge is usually along the line of hands and eyes. What he can touch or see is of vital interest to him. For him the teacher brings into requisition all objects, in the schoolroom and out of it. For him, the workshop is fitted up; visits to picture galleries and libraries are made. Sources ready at hand often contain the needed material for study. Geography can be taught objectively and effectively by reference to the landscape within sight of the schoolroom,—the hill, the adjacent wood, and the neighboring pond. The moulding table, the outline maps, the relief charts, and even a train of freight cars may supply the best of aids to the desired end. The number of the car is to be observed, the initial letters, the capacity of the car, its freight, and many other things connected therewith. Geography can be taught in an admirable manner by mutual conferences between teacher and pupils upon telegraph lines and messages. These despatches may be of business, of news, of friendship, of disaster, misfortune, or accident. Even so commonplace a thing as a postage stamp has a volume of valuable information locked up in it. Children are always interested in the collection of postage stamps. Why not utilize this impulse to increase their interest in geography and history? What historical stories are stamped upon the face of those little squares of bright colored paper, which are used to insure a speedy transmittal and delivery of our letters. The design upon the face of this little parallelogram has wrought into it, often, the successes or the agonies of a nation's lifetime. It has, for our reading, the most condensed history extant. To study it aright is to learn to read and to remember, to investigate and to discriminate with an interest keenly alive to the facts and the philosophy of geography and history. A class can hardly begin a collection of these interesting souvenirs of the nations without its leading them to study more carefully and with a keen relish and interest both the geography and the history of the world.

Again, the study of coins, even more than of stamps, leads to the development of habits of close observation, of keen analytical thought, of clear and concise deduction, robs all historical and geographical study of its dullness, and gives to it a zest and relish never before experienced. The general interest among the young in the study of stamps and coins is great in many communities. Why not add this to the many devices now in use in the schoolroom for increasing the interest in geographical and historical studies. The extent to which the collection of coins and stamps is carried on will surprise those who have not given the subject careful attention. The stamp and coin companies have invested large amounts of capital in the business and are constantly adding new lines to their already extended interests. Their collections for schools and institutions of learning are really astonishing. Thousands of boys and girls all over the country are now carrying on a correspondence with such firms and thereby adding materially to their knowledge of the world, present and past, and expanding and disciplining their minds in no mean degree. The schools should profit by the interest which the young people feel in stamps and coins.

THE education of the young in sentiments and principles of patriotism should form one of the most important functions of our public schools. Chicago has set a good example in offering prizes to the pupils in the schools for essays on "Patriotism." The income of $10,000 has been given to the school department of the city by Mr. V. F. Lawson, the publisher of The Chicago Daily News, to be expended in procuring suitable medals to be awarded each year. Mr. Lawson states the object he has in view, in the following words: "For the purpose of stimulating interest in the study of patriotic literature by the pupils of our public schools to the end that familiarity with the causes which led to the founding of the American Republic, and with the motives which inspired the struggles and sacrifices of the fathers may develop a higher standard of American citizenship." Here is an example worthy to be followed in other cities.

THE meeting of the National Educational Association at San Francisco proved to be of very high order. It was well planned and the admirable plan was equally well carried out. The people of that great city are deserving of all praise for their abundant hospitality and generosity. The cause of education upon the Pacific coast must inevitably be a great gainer for such a stimulating meeting. Now let the next meeting be at Boston, and let it be worthy of that cultured city.

HAPPY HOURS.

KING PHILIP'S INVINCIBLE FLEET.

A BALLAD OF THE ARMADA.

[The story is put into the mouth of one of the defeated Spaniards, and the expressions used are appropriate to the character.]

I, CARLOS XUCAR, of Vigo town,
Captain of carabineers,
By our Lady's love and good St. James'
Have lived these fourscore years;

Though many a hapless comrade's bones
Whiten the northern strand,
Our sweet Lady and good St. James
Have brought me safe to land.

* * * * *

'T was the feast-day of St. Margaret,
Years fifty agone and more,
We swept the narrow English seas
And sighted the English shore.

All like a mighty crescent moon,
Three leagues our galleons spread
And we swore that to Spain and the holy rood
The Briton should bow his head.

But the English, small as fishing craft,
In front and flank and rear
Hung, thick as flies round horses' eyes
In the hottest of the year.

"Fire not a shot," the Admiral said —
So straight for Flanders' shore
We steered, with the pirate in our wake,
The pirate on before.

And all the way to Calais roads
The heretics' nimble craft,
Like dancers deft, wheeled right and left
Fired for'ard, abeam, and aft.

And all the way to Calais roads
  They followed, fought and ran,
Till we anchored one night in Calais bight,
  In view of the English van.

But at dead of night, 'twixt fleet and land
  Eight devil-ships did glide;
"O the Antwerp fire! the Antwerp fire!"
  The frighted seamen cried.

We cast us loose, cut cables, fled;
  Drifted into the night;
And galleon and caracke and galleasse
  Crashed down the stream of light.

'Mid cannon and thunder and billow's roar,
  Lightning and fire-ship's flames,
Craft crashing, curses and shrieks of men —
  God-help us, and good St. James!

* * * * *

Fifty? Heaven! I could see it all
  If I lived a thousand years —
I, Carlos Xucar, of Vigo town,
  Captain of carabineers.

Cassell's Family Magazine.

THE BIG-HEADED BOY.

(RECITATION.)

OH, the big-headed boy! who knows more than his pa,
And gives advice free to his ignorant old ma;
Who the whole tree of knowledge has robbed of its fruit,
And torn up its withered old stump by the root;
Oh, the goddess of wisdom smiles blandly and coy
On the deep, spacious brow of the big-headed boy!

The big-headed boy, though he 's scarcely sixteen,
With octogenarian wisdom is lean.
The wealth of his knowledge he gives without price,
This munificent slinger of generous advice!
From his fountain of wisdom he raineth with joy
On the just and the unjust — the big-headed boy!

Oh, the big-headed boy! what a darkness and dearth
Should the light of his knowledge be quenched from the earth!
How we should be left in the darkness of doubt
As Moses was left when the light went out!
That the world wabble on without further annoy,
May he live to direct it — the big-headed boy!

Selected.

THE SQUIRREL'S LESSON.

Two little squirrels out in the sun,
One gathered nuts, the other had none;
"Time enough yet," his constant refrain;
"Summer is still only just on the wane."

Listen, my child, while I tell you his fate;
He roused him at last, but he roused him too late.
Down fell the snow from a pitiless cloud,
And gave little squirrel a spotless white shroud.

Two little boys in a schoolroom were placed,
One always perfect, the other disgraced;
"Time enough yet for my learning," he said;
"I will climb, by-and-by, from the foot to the head."

Listen, my darling, their locks are turned gray;
One as a statesman liveth to-day;
The other, a pauper, looks out at the door
Of the workhouse, and idles his days as of yore.

Two kinds of people we meet every day,
One is at work, the other at play.
Living uncared for, dying unknown —
The busiest hive hath ever a drone.

Tell me, my child, if the squirrels have taught
The lesson I longed to implant in your thought?
Answer me this, and my story is done —
Which of the two would you be, little one? *Selected.*

OUR FLAG.

Little Girl (with Flag).

Tell me, who can, about our flag,
With its Red, and White, and Blue?
How came it to have so many stars,
And of pretty stripes so few?

Little Boy.

The thirteen stripes are for thirteen States
That first into union came;
For each new State we have added a star,
But have kept the stripes the same.

Another Boy.

The number has now reached thirty-eight!
So here 's an example for you;
Take the "old thirteen" from thirty-eight,
And how many States are new?

First Boy (going to the Board).

Thirteen from thirty-eight? Let's see:
Well, three from eight leaves five,
And one from three leaves two; there 'll be,
Remainder,— twenty-five.

Little Girl.

And these all reach from east to west,
To both the ocean shores,
And over all the proud flag waves,
And the Bird of Freedom soars!

—*Selected.*

LESSONS FOR LIFE.

By an Old-fashioned Teacher.

TIMOTHY TALKATIVE.

THE schoolroom of life is before you,
Let me give you a lesson to heed:
Never forget
That the alphabet
Must be learned before you can read.
If you pass to the higher classes,
And skip the ones below,
Remember this;
You are likely to miss,
And down to the foot you 'll go.

But when you 've commenced your life-work,
And have found your proper sphere,
Pray do not fret
That you do not get
All the prizes. It would be queer
When somebody is the highest
If somebody was n't below;
If it be you
Make no ado;
Peg on the best you know.

Don't whip yourself for blunders,
Nor dream of them at night;
From beginning to end,
On yourself depend,
But work in the Teacher's right.
And if you should be bothered,
In thinking what to say,
Look over the Rule
He has given the school,
And *write it out that way.*

If the lessons of life grow harder
  As you climb truth's rugged hill,
    Nevertheless,
    There 'll be a recess;
  So keep on plodding still.
And though your mistakes are many,
  Don't try to rub them out,
    But cipher today
    In a better way,
  The answer will come, no doubt.

THE STUDY OF SYNONYMS.

Liberty and Freedom.

1. **Liberty** is derived from the Latin.
   Freedom is derived from the Anglo-Saxon.
2. Both refer to the state of being free.
3. **Liberty** has reference to previous restraint.
   Freedom has reference to the simple unrepressed exercise of our powers.
   A slave is set at LIBERTY, but his master had always been in a state of FREEDOM.
4. The LIBERTY of the press is our great security for FREEDOM of thought.

Facility, Expertness and Readiness.

1. **Facility** and **Expertness** are derived from the Latin.
   Readiness is derived from the Anglo-Saxon.
2. These words, when synonymous, all refer to the performing of some act promptly and quickly.
3. **Facility** is general and denotes either a natural or acquired power, while EXPERTNESS is particular and requires long continued practice.
   Facility refers to the power of performing a task with dexterity, while READINESS marks the promptitude with which anything is done.
4. A merchant needs great FACILITY in dispatching business, a banker great EXPERTNESS in casting accounts, both need great READINESS in passing from one employment to another.

Specimen and Sample.

1. **Specimen** is derived from the Latin.
   Sample from the Latin through the French.
2. Both refer to a portion of anything which is intended to represent the whole.
3. A SPECIMEN represents the class of things to which it belongs.
   A SAMPLE designates the quality of the whole.
4. While examining the cabinet I broke off a piece of one of the SPECIMENS, which I send to you as a SAMPLE that you may determine what mineral it is.

Abdicate and Resign.

1. Both are derived from the Latin.

2. Both refer to the surrendering of an office.
3. ABDICATE expresses the act of a monarch in yielding up authority.
   RESIGN is applied to the act of any person who gives back an office to those who conferred it.
4. The manager RESIGNED his position to the corporation after having been elected to the office each year for a quarter of a century. When the king ABDICATED the throne, general confusion arose as to who should appoint the new monarch.

EXAMINATION QUESTIONS.

Selected from those given at Lawrence Street School, Newark, N. J., Dec., 1887.

LANGUAGE.

GRADE I. — GRAMMAR DEPARTMENT.

NOTE. — When the question calls for a particular thing, UNDERLINE the example which you give in your answer.

1. Write a composition of fifteen or twenty lines on one of the following subjects: —

   a. The Christmas Holidays.
   b. How may I become the man or woman I would like to be.
   c. A description of the last book you have read.

NOTE. — Judge the composition with reference to the following points, viz.: Mental power exhibited, margin and indentation, punctuation, capitals, correct grammatical forms, spelling, and neatness.

2. When our Pilgrim Fathers left their homes in England, the weather was pleasant and warm. The gardens were full of flowers; the hills were green; the birds were singing. After the Mayflower had been tossing on the stormy ocean for sixty-three days, the Pilgrims were told that they had reached their new home. The little company crowded on deck, full of hope, for they had heard pleasant things of America.

From the preceding paragraph, answer the following: —

a. Name a verb in the passive voice.

b. Parse "*had been tossing.*"

c. Select a verb in the present perfect tense, and one in the past tense; name each.

d. Select an adverb clause.

e. Select an independent clause.

3. From the same paragraph select a sentence having a noun clause. Analyze the last sentence in the same paragraph.

ARITHMETIC.

GRADE I. — GRAMMAR DEPARTMENT.

1. A merchant sold 3 pieces of muslin, each containing 45 yards, at 40½ cents a yard, and took his pay in wheat at $1⅛ a bushel; how much wheat did he receive?

2. The sides of a roof are 45 feet long and 20 feet wide; what will it cost

to shingle both sides, at $15.45 per thousand, allowing 1,000 shingles to every 100 square feet?

3. A cow was sold for $35, which was at a loss of 30 per cent.; required her cost, and how much per cent. would have been lost had the selling price been $40?

4. Two building lots were sold for $500 each; one was sold at a gain of 25 per cent. and the other at a loss of 25 per cent.; how much was gained or lost on the transaction?

5. A house valued at $6,000 was insured for ⅘ of its value at ¾ per cent., and the barn, worth $1,000, for ⅗ of its value at ⅕ per cent.; required the amount insured, and the cost.

6. At 4½ cents per pound, how much is the duty on 215 bags of coffee, each bag weighing 60 pounds, allowing 2½ per cent. for tare?

7. A town worth $1,600,000 is taxed for $12,200; $1,000 is raised by poll tax. How much must a man pay who owns $10,000 real estate, and $2,000 personal property?

8. If a gang of men can do $\frac{18}{20}$ of a job in 5½ days; what part of it can they do in one day? Analyze.

ARITHMETIC.

Given at midwinter (February) examination for promotion in Primary School No. 21, Third Grade, Jersey City, N. J.

SLATE WORK.

A grocer sold ½ of a dozen oranges to one man, ¼ of a dozen to another, and ⅚ of a dozen to another. He then had two dozen left; how many did he have at first?

Two men start from the same place and travel in opposite directions. One travels 32 miles a day, and the other travels 34 miles a day. How far apart will they be at the end of 6 days?

A lady bought a dress for $13.75, some braid for 62 cents, a coat for $15, and shoes for $4.50. She gave the storekeeper 4 ten-dollar bills. What change did she receive?

If 4 yards of lace cost $5.56, how much will 15 yards cost?

In an orchard there were 6 rows of trees, with 13 trees in each row, and 37 trees around the outer edge of the orchard. If 58 trees died, how many were left?

A man had $47 to buy 6 cords of wood at $7 a cord. How much money did he have left?

A man bought 2 bushels of apples at 75 cents a bushel, and sold them for 37 cents a peck. How much did he gain if one peck was bad?

I bought 12 yards of cloth for $2.88. What did it cost a yard?

From a stock of 16,350 tons of coal, a man sold 572 to one man, 659 tons to another, 3,028 tons to another, and 8,470 tons to another man. How many tons had he left?

A horse cost $200, and a sleigh cost ⅔ as much as the horse. What was the cost of both?

MENTAL WORK.

If I divide 49 plums equally among 7 children, what part of the 49 plums will I give to each child?

I ordered a pound of steak, but the piece brought to me weighed 1¼ pounds. How many ounces did I get?

If it is ⅜ of a mile to the foot of a hill. and ⅛ of a mile up the hill, what part of a mile in the whole distance?

What will 1 bushel of nuts cost at 3 cents a quart?

A room is 8 feet long and 4 feet wide. How many yards is it around the room?

Charles is 15 years old, his father is 3 times as old, and his mother is 5 years younger than his father. How old is his mother?

If it takes one man 30 days to do a piece of work, how many days will it take 5 men to do the same work?

If 4 tons of hay cost $48, what will 9 tons cost?

I had 24 cents. I gave ½ of them to one boy, and ⅜ to another. What did I have for myself?

I bought an umbrella for $1.25, a dress for $1.25, some ribbon for 20 cents, and cotton for 5 cents. How much did I pay for all?

GEOGRAPHY.

1. Draw an outline map of North America; locate mountains and rivers.
2. On this map locate, by initial letter, ten important cities.
3. Start in a vessel from Duluth and describe your voyage to Liverpool, England.
4. State what you know of the Great Central Plain of the United States. Name two rivers of this plain.
5. Describe the country between the Rocky Mountains and the California Mountains. Between the California Mountains and the Pacific Coast.
6. Name and locate the capital of each of the New England states.
7. Draw an outline map of Massachusetts, and on it locate Boston, Springfield, Worcester, New Bedford, Fall River, Salem, Portsmouth, Lowell, Lawrence, Lynn.
8. Describe the people of New England.
9. Name the Capes and Bays on the Atlantic coast of North America.
10. Name three rivers having their source in the Rocky Mountains; give their direction and into what they flow.

HISTORY.

1. Who were the Pilgrim Fathers? State the difference, if any, between Puritan and Separatist, and tell how the names originated.
2. Give as many important facts about General Jackson as you can in the space below.
3. Which do you regard as the most important war; the Revolution, or the War of 1812? Why?
4. What is the "Monroe Doctrine"? Why so called?
5. What caused the Mexican War? Name three generals who took part in it. Who was the Mexican commander-in-chief? How did this war result? Who was president of the United States at this time?
6. Who was president of the United States in 1860? Name the most important event in his administration.

7. When did the Civil War begin? When end? What states first seceded? How many states seceded?

8. Name the President, Vice President, and three leading generals of the so-called Confederate States.

9. What event in the early part of the Civil War came near causing war between United States and England? How was war avoided?

10. Name the last five Presidents, stating the length of time each served and some important event in the administration of each.

TEMPERANCE HYGIENE.

1. Name the stimulants and narcotics in most common use.

2. Fatty degeneration, what is it? How caused by alcohol?

3. Composition of the brain; proportion of water, of albumen; effect produced on the brain by alcoholic beverages.

4. Define intoxication; indicate its several stages.

5. How does alcohol affect the walls of the stomach?

6. What element of food is made indigestible by the presence of alcohol? Illustrate.

7. How are the intellectual faculties, as memory, judgment, and will affected by the alcoholic habit?

8. Cause of the sensation of warmth which follows the drinking of alcoholic liquors.

9. Name the proper uses of alcohol. Name the proper uses of tobacco.

10. What are the poisonous elements of tobacco? Amount and power of these poisons?

11. How does the use of tobacco affect digestion?

12. How does the tobacco habit affect the heart and its action? What other organs are affected?

13. Wherein are tobacco habits especially harmful to youth?

14. Why ought the young to avoid the use of tea and coffee?

15. Opium; where found and how produced?

PHYSIOLOGY.

1. Why should we put on extra covering when we lie down to sleep? Why are high pillows injurious?

2. Describe the chest.

3. What are voluntary muscles? Example? Describe the diaphragm.

4. Describe the change food undergoes in the stomach.

5. Name the circulatory organs. How can the blood be kept pure?

6. Describe the trachea.

7. Which requires more clothing, a child or an adult? Why?

8. Why is wool clothing warmer than cotton or linen? What colored clothing is warmest? Why?

9. What is a nerve center? Where are the nerve centers?

10. Give some general directions for nurses in sick room.

CIVIL GOVERNMENT.

1. What kind of government is that of the United States? How often does Congress assemble? When? How are U. S. Senators elected? What do Senators represent?

2. What does the word citizen mean? How many ways of becoming a citizen of the United States?

3. How long does it require for a person of foreign birth to become eligible to the House of Representatives? What is naturalization?

4. What is meant by a member of the House being elected *at large?* When are members so elected?

5. When was slavery abolished in this country? How was it abolished?

6. How many times has the census of the U. S. been taken? When will it be taken again? Who has control of this matter? About what is the population of this country now?

7. What must be the qualification of voters? Of what do State Legislatures consist? What is impeachment? Has the House ever elected a President of the United States?

8. How long does a senator hold his office? A representative? Which is the most important position? Why?

9. What is the salary of the President of the United States? Of the Vice-President? Give some of the duties of the President.

10. What is an *ex-post-facto* law? What is treason?

GRAMMAR.

1. Fill the blank in the following sentences with pronouns: I cannot believe it to be——. ——do you think it is? I thought it was——. ——will he promote. I do not know——you mean. It is not——who are to blame.

2. Fill each blank with a verb: Either one of them——pretty. Every book and every knife——yours. Each man and each woman and each child ——. The carriage but not the horses——injured. The audience——attentive and appreciative.

3. Use the following words in sentences: Plentiful, plenty, dangerous, contemptuous, contemptible.

4. Correct whatever is faulty in the following: john henry and me thought we'd go to N. Y. So john says lets go by water No says henry I'd rather go via R, R, so I seeing that they were disagreeing with each other had to settle it and I says weel split the difference and go part of the way by both: we got ready and started at four P M Sat Aug. 2n. we stopped over night at Lacross and the next day saw us scooting across the country at a glorious rate toward the place we'd started for.

5. Write a model letter.

6. Diagram or parse the following: On piety, humanity is built, and, on humanity, much happiness; and yet still more on piety itself.

7. Write all the forms of the verbs: pass, hang, down, drown, hurt, shine.

8. Define discourse, sentence, proposition, clause.

9. Write (1) a sentence having a substantive clause: (2) a sentence having an adjective clause: (3) a sentence having a participial phrase: (4) a sentence having an adverbial phrase: (5) a complex sentence having the subordinate clause modified by an adjective phrase.

BOOK NOTICES.

First Lessons in English. By F. B. Greene, A. M. Philadelphia: Cowperthwait & Co. Pp. 144.

No end to new books on the study of the English language. Some are called Language Lessons, some Lessons in Grammar, and some Lessons in English. Forty years ago they were all textbooks upon Grammar. Ten or fifteen years ago they were Language Lessons. The pendulum swings. We have now largely got over our aversion to grammar and grammatical terms. This book deals in simple lessons in English, thereby meaning grammatical lessons in fact without knowing it. Practical lessons are given objectively upon all the parts of speech, and the child is plainly and easily led to see how each should be used. The book goes further and shows us both how to speak and how to write. The way to learn English is to use it. This book teaches its use. It is one of the best books we have seen from which to teach young children the facts and the proper use of our good old English tongue. It is finely printed and beautifully illustrated.

The Child and Nature; or Geography Teaching with Sand Modelling. By Alex. E. Frye. American Pedagogical Series, Volume I. Hyde Park, Mass. Bay State Publishing Company: 1888. Pp. 216.

"The aim of this work is,—

"1. To grade and apportion the subject-matter of natural geography to the successive stages of development of the child's mind, and rid the study of its myriads of worthless details.

"2. To direct attention to the laws of mind growth which condition methods of teaching, and to suggest devices for stimulating and directing mental energy.

"3. To review the literature of geography, and indicate lines of study for teachers."

The work is divided into two parts, Home and Foreign Geography, each part comprising the explanation and making of reliefs; the forces, as water, soil-making, air, climate, winds, ocean-currents, the life of plants and animals, and the occupations, commerce, races, religions, and governments of man. 'Of not the least advantage to teachers of geography is the appendix, which contains an excellent and exhaustive bibliography of the subject.

This is one of the most important additions to our aids for the teaching of geography. No wide awake teacher can afford to be without it.

Popular Physics. By J. Dorman Steele, Ph. D., F. G. S., author of "Fourteen Weeks' Series" in Natural Science. Pp. 380. New York and Chicago: A. S. Barnes & Co.

Teachers need no introduction to the "Fourteen Weeks' Series," and all that can be said here must be to speak of the revision of the "Fourteen Weeks in Natural Philosophy." For this purpose, a few lines are taken from the Publisher's Preface: "Shortly before his death, finding his health too feeble to permit of extra labor, the author requested Dr. W. Le C. Stevens, Professor of Physics in the Packer Collegiate Institute, Brooklyn, to revise the textbook in Physics, as important advances in this department of science had been made since the issue of the edition of 1878. In performing this work, Professor Stevens has endeavored to impose the least possible modification upon the peculiar style of the author. Nevertheless, every chapter has received some alterations and slight enlargement." This book will receive, as it deserves, a very extended sale. Its statements are remarkably clear, and the book in the hands of the average High School teacher for use, with the average class of boys and girls, will give great satisfaction.

Grammar School Reader. Vol. I. Price, 90 cents.

History and Science Reader. The Interstate Publishing Co., Boston: 30 Franklin Street. Chicago: 183 Wabash Ave. Price, 50 cents.

Vol. I. of the Grammar School Reader contains three hundred and eighteen pages, is fully illustrated, and finely bound in cloth. Stories and sketches by best authors. An excellent book for a reader, since it is made up of stories that cannot fail of interesting the pupils. It is also a book that will be held as a treasure in any family.

The History and Science Reader contains one hundred and ninety-four pages, with continued articles under titles, "Magna Charta Stories," "Little Biographies—Music," "The Traveling Law School," "Old Ocean," "Health and Strength Papers," etc., by famous authors, beautifully illustrated, and tastefully bound in cloth, for school use. This book also is one from which the children will learn much that is valuable.

These two books are made from material which has been used the past two years in the monthly "Grammar School," the first being made up of stories, the latter of the "Supplement" or "History and Science Department."

MAGAZINES.

Possibly no other department of our literature has made more rapid improvement within the last ten or a dozen years than the magazines. *The Century*, *Scribner's*, *The Forum*, *The American Magazine*, *The Atlantic*, *The New Princeton*, *The North American Review*, *The Catholic World*, *The Popular Science Monthly*, *Lippincott's*, *New Englander*, *Andover Review Presbyterian Review*, *Frank Leslie*, *Cosmopolitan*, and a host of others "too numerous to mention," are all witnesses to the giant strides of improvement made in this direction. We have not space to speak of them all in detail, but shall from month to month call the especial attention of our readers particularly to those articles which seem to have the greatest interest and to be of the greatest value to the educational fraternity. Every teacher should, however, constantly bear in mind that much reading should be done outside of professional lines. —Mrs. Martha J. Lamb gives, in the September number of *The American Magazine of History*, an especially interesting and well-illustrated account of Marietta, Ohio, speaking particularly of the foundation of civil government beyond the Ohio River.—"The Story of Boston Common" is given in Edward Everett Hale's usual bright, attractive style, in the September *Wide Awake*.—*The Forum* for September gives a glowing tribute to the Government of the United States, from the pen of the Marquis of Lorne. Every American citizen ought to be more proud of his country after reading this answer to an "eminent American writer." The article is entitled "Distrust of Popular Government."—Paul R. Cleveland discusses in the August *Cosmopolitan* the question, "Is Literature Bread-winning?"—All lovers of history and civil government will be glad to read John Fiske's account of the "First Year of the Continental Congress," in the September number of the *Atlantic Monthly*. —A unique article on "History in Names" by Rev. G. H. Hubbard, of North Cambridge, is given in the *New Englander and Yale Review*.—The question, "What is a Royal Commission?" is answered in the September number of *Cassell's*, by George Howell, M. P.—Prof. John W. Burgess gives an account of "The German Emperor," in the *Political Science Quarterly*.—The excellent articles on Abraham Lincoln still continue in the *Century*. The August number gives the history connected with Tennessee and Kentucky.—*The Overland Monthly* for August opens with an article about the great artesian belt of the Upper San Joaquin Valley.—A most instructive as well as interesting article is to be found in the August *Scribner's*, by N. S. Shaler, on "Rivers and Valleys."—In the September *Wide Awake*, Rev. H. O. Ladd, President of the University of New Mexico, describes the Ramona Industrial School at Santa Fé, and the Ramona Memorial Hall, a beautiful school for Indian Girls which is being built as a monument to "H. H." The *Wide Awake* children are invited to build the Refectory in the school, giving *two cents a week* for a year. This dining-hall is to cost a thousand dollars, and is to be known as the *Wide Awake Refectory*. The names of the "Refectory Thousand"—the givers—are to be hung in the hall, and are also to be printed in *Wide Awake*.

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VOL. II. OCTOBER, 1888. No. 8.

THE PERILS OF PRACTICE.

BY EDITH E. INGALLS, LOUISVILLE, KY.

IT may be that "practice makes perfect" in the practical arts, that the great company of mechanical workers fall pleasantly in sympathy with this venerable adage, but whether it is equally true in the work of teachers might prove a fruitful theme of discussion.

As the years renew the self-same work with precisely the same future in prospect with which the past has made us familiar, there are perhaps a few who would confess to their inner consciousness a waning of that youthful zeal that once animated their efforts, and a tendency to slip among the above-named "mechanical workers" without the accompanying reward of perfection. For, strange as it may seem, rule and routine, line and plummet, find little favor in our chosen profession. Its demands are for those subtle, impalpable commodities, enthusiasm, interest, novelty, — all hard to get, hard to keep, and hard to renew. For, unfortunately, they cannot be manufactured, borrowed, or stolen. Tried by that method, the counterfeit is soon detected and each fails of its purpose. They claim to be genuine and will come spontaneously or not at all.

At this juncture, one is reminded of Emerson in his essay upon "Inspiration." What does he say of the tricks of the poet or writer to gain the necessary impetus? He cannot work himself into the right frame of mind, but he can put himself in the way of winning it. When Emerson wished to write with unction, he began to read. The subject mattered little; it might or might not relate to his own theme. But it was in itself something inspiring, awakening, and his own responsive faculties rose in ready sympathy.

Now, so good a rule might in spirit be more generally adopted. Is there any one who feels in need of an awakening influence he cannot command, let him put himself in the way of getting it. Every workman knows what can arouse him best.

But it is the prevailing opinion that animation only accompanies the freshness of youth. Even Emerson, whose optimism is proverbial, writes: "We must prize our own youth. Later, we want heat to execute our plans; the good will, the knowledge, the whole armory of means are all present; but a certain heat that once used not to fail refuses its office." Is it not because we are resting upon the means of a past stage of our existence? Do we earnestly seek the teaching of a daily development? We are simply trying to repeat a past success in the exact way in which it was won. This is impossible. It clashes with a deep-seated instinct we all cherish with an abiding faith,—the instinct of progress. Each stage of growth brings its own excellence. Goethe thus speaks of the maturity of Wilhelm Meister: "The ardent, aspiring youth has grown into the calmest man, yet with increase and not loss of ardor, and with aspirations higher as well as clearer."

To return to the perils of practice in teaching, we have nevertheless a dubious feeling, that despite the aforenamed inspiring principle, the narcotic influence of constant repetition still remains in our profession an undeniable fact. The proposition becomes, how to vanquish that somnolence, and, coupling the immense advantages of trained skill with the animating power of enthusiasm, form an irresistible co-operation.

Above all, we would rear on high the standard of *work*. Work hard for anything and you become interested in it. How is it with some experienced in the service? Has not effort been paralyzed with the reflection, "I have made my reputation and may now rest"? Let us consider the faded blank books most tenderly treasured, those well-planned methods of instruction never desecrated by the unhallowed presence of alteration. Yet we are so tired of doing the same thing,—we sigh for new fields!

Weary of repetition! Take it as a harbinger of something better. Do anything; work, dig, read, if possible travel and find the something fresh that rests somewhere for you in your work. *Don't* resurrect the old blank books. Why, the very words have grown so familiar that they stir not a fiber of your brain. Variety for the sake of variety, you tell me, is a very poor thing, yet I say make a beginning even with that. If you have taught the six per cent. method, venture upon the twelve per cent. Think of the immense improvement to be gained through the aid of contemporary thought. What a bonanza to the weary teacher of the "states and their capitals" are the copiously illustrated articles now published upon leading American cities. I have carefully hoarded them, and promise myself the pleasure of some wide-awake talks with the small travelers of my schoolroom. I may commit the heresy of neglecting the opening questions upon the sphere, its equatorial and polar diameters, the inclination of the earth's axis, and other equally lucid points, but perhaps we may reach the sphere at the other end with equal profit.

Another potent reanimating power, a faithful watch-guard of many perils, is wider study. One teacher of a primary grade told me with kindling eyes, that only after a thorough mastering of Newton's Algebra, did she feel competent to teach fractions intelligently; morever, that in future she intended to teach the Greatest Common Divisor upon scientific principles, and treat the children fairly by giving them the reason for that method, not the rule.

Then, being a student imparts a fellow feeling that "makes us wondrous kind." Meeting difficulties ourselves awakens in us a lively sympathy for those of children. Otherwise, a path so familiar to us as their course suggests no possible obstacle. And in that does the experienced teacher lose immeasurably. A ready sympathy with young needs, and a gentle hand in relieving them, are so in danger of being lost that we should eagerly cherish the antidote.

Then, in study, there is not only the advantage of reflex influence, but the renewal, as it were, of the whole being. In our city, regular classes in higher mathematics, literature, and science were eagerly attended, and many were the pleasant anticipations of these meetings, and quite noticeable the greater air of buoyancy among the teachers who attended.

Another peril into which many of us fall, is the determination to mould humanity upon a plan. And yet, in the diversity of human nature, there is certainly endless, and sometimes hopeless variety. Therefore, not only must the individual receive careful scrutiny, but each individual class. The clever eye will detect the general or specific aptitude, and by emphasizing that secure the greatest happiness. A whole class, as we well know, may excel in writing or drawing, may develop a mathematical turn, or enjoy composition supremely. The pleasure of working in these may become the reward of faithfulness in the others, and with the co-operation of the teacher, excellence in the favored work promotes great pride and enjoyment.

Conservatism, with its attendant narrowness, is most certainly "a trap to catch the unwary." Many teachers never forget the fact of their vocation. Their society is confined to that of their colleagues, to institutes, and the discussion of professional themes, their reading to professional journals; all perfectly proper, but injurious when made the be-all and the end-all. Goethe advises man to plunge deeply into the full stream of human life. By doing so we may lose the knowledge of a few technicalities, but what a gain in breadth! Thackeray has given a warning to narrowness in his contrasting picture of George Warrington and Paley, both law students. "There may be doubts as to which was using his time best. The one (Warrington), could afford to think, and the other never could. The one could have sympathies and do kindnesses; and the other must needs be always selfish. He had no time, no eyes for anything but his law books. All was dark outside his reading lamp."

Doubtless, despite the most earnest effort, the work of the educator is beset with peculiar difficulties, making such draughts upon his physical and intellectual life that he will be overwhelmed with a "sense of limitation," but take comfort, "thereby real expansion," to quote again the German master. Only a deep love for the work, such as inspired Lydgate in his zeal for medicine, or Mary Lyon of our own profession, can bring that fertility of resource well-nigh unfailing, and that patience content to work and wait. To the educator, so happily endowed, the lapse of years brings no decay of interest. Rather does he find himself like Wordsworth in his devotion to nature,

"Unwearied in the service: rather say
With warmer love, oh! with far deeper zeal
Of holier love."

METHODS OF TEACHING ARITHMETIC IN PRIMARY SCHOOLS.[1]

BY LARKIN DUNTON, LL. D.,
Head Master of the Boston Normal School.

XVIII.

SUBTRACTION.

BEFORE beginning the subtraction of numbers above a hundred, the subtraction of numbers below a hundred should be thoroughly reviewed. When this has been done, a judicious use of Chart XIII. will save the teacher much time and labor.

In the first stage of this work the minuend should not exceed 200. If, now, the pupil is taught to think of each number on Chart XIII. as 100 larger than it is, and to use these increased numbers as minuends, each number on the Chart may be used as a subtrahend, and thus the teacher will have, ready made, 100×100, or 10,000 examples in subtraction.

These examples should be assigned in the following order: —

a. The subtrahend containing tens only; as,

101—20 101—60
112—20 112—60
etc., etc. etc., etc.

b. The subtrahend containing tens and units; as,

101—24 101—67
112—24 112—67
etc., etc. etc., etc.

Any number from 201 to 1,000 may be used as a minuend, and each of the numbers on Chart XIII. as a subtrahend, and thus we have 80,000 more examples in subtraction without the trouble of inventing them or writing them on the board.

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[1] Copyright, 1887, by Larkin Dunton.

These examples are all to be solved mentally. When it is desirable to have the results written down by the pupils, the written work may assume this form: —

147— 1=146 147— 2=145
147—12=135 147—19=128
147—26=121 147—22=125
147—34=113 147—31=116
147—47=100 147—43=104
etc., etc., etc. etc., etc., etc.

Or the work may be more briefly represented thus: —

	a.	*b.*	*c.*	*d.*	*e.*	*f.*	*g.*	*h.*	*i.*	*k.*
l.	146	135	121	113	100	94	80	71	63	51
m.	145	128	125	116	104	95	77	74	60	54
n.	etc.,	etc.								

The rule for subtracting numbers consisting of units and tens, as previously given, is this: First subtract the tens, then the units; as,

132—47; 132—40=92; 92—7=85; so 132—47=85.

The brightest pupils may be encouraged to find new ways of reaching the result; for example: —

47=50—3; 132—50=82; 82+3=85.
47=42+5; 132—42=90; 90—5=85.

If the work here indicated on numbers below 200 is thoroughly done, no special difficulty will be found in the subtraction of numbers between 200 and 1,000. It would be well, however, to grade the work in the following way: —

a. The minuend containing hundreds and tens; the subtrahend containing tens only; as,

940—80=860.
760—80=680.
680—80=600.
etc., etc., etc.

b. The minuend containing hundreds, tens, and units; the subtrahend containing only tens; as,

997—60=937.
937—60=877.
877—60=817.
etc., etc., etc.

c. The minuend containing hundreds, tens, and units; the subtrahend containing tens and units; as,

$997-67=930.$
$930-67=863.$
$863-67=796.$
etc., etc., etc.

d. Both minuend and subtrahend containing hundreds, tens, and units; as,

$993-267=726.$

In all cases the rule for the subtraction of a number consisting of units, tens, and hundreds is this: Never separate the minuend into parts; but subtract the hundreds of the subtrahend first, then the tens, and last the units; for example: —

$993-267$; $993-200=793$; $793-60=733$; $733-7=726.$

Here the subtraction can sometimes be most easily performed by adding enough to the subtrahend to make a sum equal to the minuend; for example: —

$975-388.$
$388+12=400;$
$400+575=975;$
$575+12=587.$

It is possible to construct drill exercises in addition and subtraction, by making the processes alternate, which will at the same time require much work on the part of the pupils and very little on the part of the teacher. Suppose the exercise set for the class to be this: Beginning with 746 alternately, add 248 and subtract 273. The work would assume the following form on the slates:

$746+248=994$ $994-273=721$
$721+248=969$ $969-273=696$
$696+248=944$ $944-273=671$
$671+248=919$ $919-273=646$

The final result is just 100 less than 746, the number with which the work began. The reason is that 273, the number to be subtracted is 25 more than 248, the number to be added, and consequently each addition and subtraction diminishes the original number 25; and four additions and subtractions diminish it just 100.

The teacher can readily construct any amount of drill work, such that the correction of slates will be as easy as in the example given; for he has only to substitute any other number for 476, and any other numbers differing from each other by 25 for 248 and 273.

This kind of examples is well adapted to furnishing every pupil, dull or bright, with all the work he can do in a given time; for the work in the problem given above is only to be continued in order to furnish 29 examples in addition and as many in subtraction, which can be corrected at a glance.

While facility in addition and subtraction is of the greatest importance in practical business, care must be taken not to weary and discourage the pupils. Hence it is recommended that problems like those given above be not introduced too often, nor continued too long.

THE HISTORY OF OUR COUNTRY: HOW TO TEACH IT.[1]

VIII.

LOCAL HISTORY FOR PRIMARY CLASSES.—II.

BY NINA MOORE, AUTHOR OF "PILGRIMS AND PURITANS."

WHILE the stories told to the children were intended to form a sequence, to give them a connected narrative of the history of their own small part of the world, they were also meant to throw the different epochs of that history into clear relief. From the stories of the period of settlement, therefore, the class passed almost directly to stories of the beginning of the Revolution, omitting intermediate events.

To bridge the gap, however, we took our map of the Boston of Winthrop's time, and recorded upon it a few of the changes that occurred in the town during the hundred years after Winthrop's death. The Old South Church was built upon Winthrop's garden. The Province House was used by Royal Governors. The Old State House was erected in the market place.

This much having been done, I asked the children what they supposed people in England thought of the colonies in America, and we had a talk about King George III., the Parliament, taxes,

[1] Copyright, 1888, by William A. Mowry.

etc. This opened the subject of the disagreements between the mother country and the colonies.

The first picture to be given in the long series of events which led to the beginning of the Revolution was that of the excitement caused in Boston by the passage of the Stamp Act. Here we had Hutchinson on the one hand, and on the other the Boston rebels, represented by the Sons of Liberty. Hutchinson at home, writing the history of which he was himself a part, or in the Old State House, vainly trying to reconcile opposing interests; the Sons of Liberty, holding their meetings in their out-door Liberty Hall and hanging effigies of Lord Bute and Andrew Oliver from the branches of Liberty Tree.

We imagined Hutchinson's feelings as he sat in the council chamber, listening to the crowd's determined shout of "Liberty, Property, and no Stamps!" and we agreed with Adams when he pronounced the sacking of Hutchinson's house "a high-handed outrage."

It was with this introduction, as a man of temperate, just mind, that Samuel Adams came to the fore. From that time he, the Father of the Revolution, was the children's hero and favorite. His portrait, found in Mr. Scudder's "Boston Town," was looked at, his patriotism and sagacity discussed.

When British troops were sent to Boston, and the affray which has been called the Boston Massacre took place, it was Samuel Adams who was sent to Hutchinson to demand the removal of the soldiers. The children were never tired of hearing me tell them, or of repeating to me the story of Adams's going to the Old State House, receiving Hutchinson's first answer, that *one* regiment might be quartered on Castle Island, then making his way to the Old South through the crowded street, giving right and left the cue, "Both regiments or none!" and returning once more to Hutchinson with the people's word, "Both or none!" That the king's soldiers should come thus to be called "Sam Adams's regiments" pleased Young America mightily.

They were glad to find Adams again in the next story, that of the Boston Tea-party, where his words, spoken in the Old South, "This meeting can do nothing more to save the country," gave the signal for the destruction of the tea. Upon their tracings of the map of Boston they marked the position of Griffin's Wharf, now Liverpool Wharf, where the tea-ships lay, and with the aid of one or two rather poor illustrations, were able to form some idea of the scene. Every graphic detail, every homely realistic touch that gave color to the picture in their minds was seized on eagerly, and related again by them with great relish.

The Memorial History of Boston, and the biographies of Samuel Adams furnish material for the foregoing stories. For the lessons which followed my chief dependence was Frothingham's "Siege of Boston."

Gage's coming, the closing of the port of Boston, the friendliness of Salem and Marblehead, the collecting of military stores at Concord and Worcester necessitated the study of a map of Boston and its vicinity. In this the children showed much interest, for it taught them the relative position of towns with which they had become familiar in their drives, or had lived in during the summer time.

The fact that Samuel Adams had encouraged the collection of arms and ammunition, and that he was in hiding at Lexington with John Hancock when the British went out to Lexington and Concord, gave additional interest to the story of the April march. From the ride of Paul Revere to the retreat of the British over Charlestown Neck, the attention of the class was unflagging.

The route taken by the British was traced upon the map; their hearing the alarm-bells and sending back to Boston for reinforcements recounted; as was their approach to Lexington and Pitcairn's unheeded order, "Ye villains, ye rebels, disperse — lay down your arms!" The brave stand made by Captain Parker and his men, at Lexington; the words of Captain Isaac Davis at Concord, just before he led his men to dislodge the British at the bridge,— "I have n't a man that is afraid to go," —the determined attack upon the Regulars kept up from behind every stone-wall along their route of return; the timely appearance of Percy to rescue the tired troops, the disorderly run into Charlestown at sunset; all these incidents lodged in the memories of the children and were retold with spirit and precision.

There are several absurd and yet suggestive pictures drawn shortly after the battle of Lexington, and reproduced in Views of Antique Boston, which delighted the children. Moreover, even the crudest sketches on the blackboard were accepted and drawn again by the small lecturers when their turn for speaking came. Nor was this all. Occasionally, in some spare quarter of an hour, papers were passed to the class, and each child, selecting some episode not taken by any one else, would make a picture of that particular event or incident, as much to his teacher's satisfaction as to his own, for besides being extremely amusing, these attempts often showed a comprehension of the situation that was astonishing, and sometimes brought out mistaken conceptions which otherwise might have gone uncorrected for a long time. After his words, on the day of the battle of Lexington, "This is a glorious morning for the country!" Adams withdraws into a field of action where the children cannot well follow him. Warren then became for a short time the center around which events were grouped. We visited the Old South again, to see the window through which Warren climbed to give his fifth of March oration; and also went to Christ Church and the Old State House, reviewing in each place the stories with which it was connected.

There is something peculiarly touching in Warren's fate, when we remember that he did not fully approve of the plan for fortifying Bunker's Hill, but went to serve as a subordinate in an action where his loyalty to his fellow-workers cost him his life. The children regarded him with a half-comprehending reverence. Their admiration was claimed equally by Prescott and Old Put. Prescott's nine o'clock march from Cambridge, where the American forces were assembled, his night's labor on the fortifications, while from the British man-of-war and from the Boston shore came the hourly cry, "All's well!" his walking on the parapet of the redoubt to set an example of fearlessness when the cannon-balls came ploughing up the ground around his men, his backward retreat, "stepping long," and defending himself with his sword, when the lack of ammunition forced him to retire, made a deep impression on the class, as did Putnam's coolness and indefatigable exertions.

Great was the surprise when the children first realized that the Battle of Bunker Hill was a defeat for the Americans. For a few moments the exhilaration which they had felt in hearing of the gallant defence of the hill was utterly quenched. With Prescott driven off, and the rail fence abandoned, and Warren dead, they experienced a keen disappointment which left them only when they learned how others felt about the day, and were convinced that a difficult defeat was worth several easy victories in that stage of affairs.

The coming of Washington was our next theme. We saw him reviewing the army on Cambridge Common, and receiving his friends in the Craigie House,—since the home of Longfellow,—and fortifying the shore through the tedious winter when the lack of powder kept him otherwise inactive, and, finally, occupying Dorchester Heights, and driving the enemy away.

With the evacuation of the town by the British, Boston's close identification with the history of the Revolution ceases. The children begged me to follow the soldiers to New York and tell them about the other battles which resulted in establishing our independence. They would try to understand about the war, they said, even if all that happened later did take place in parts of the country that they knew nothing about. No; those stories they might read for themselves when they were older; so with curiosity still unsated they agreed to wait until that time should come, and meanwhile turned with me to look at Boston's treatment of the fugitive slaves.

COUNTRY SCHOOLS.[1]

BY SUPT. J. G. EDGERLY, FITCHBURG, MASS.

III.

THE interruptions to study are frequent. This is a feature of school work not likely to be understood. The attention of the younger pupils is distracted, oftentimes, by the recitations of the older ones. This is not always, however, the hindrance that it seems, or that it is represented to be, and as it is a necessity some notice should be taken of this phase of the question, and provision made for utilizing the time and the means employed with the upper classes.

The members of the lower classes are often not only kept quiet by listening to the older ones, but they also learn much from the recitations of the others. This is the case, especially, in reading. Who does not remember that in listening to the older classes as they read: "Chained in the market place he stood," "Forced from home and all its pleasures," "On Linden when the sun was low," etc., he learned to repeat the words before he reached that degree of advancement that permitted him to read in the "First Class Reader"? We may talk as we will of the injurious effects of this listening, yet it cannot be avoided, and the ingenious teacher may turn it to good account. Many a pupil before he studies grammar is able to repeat the rule, "The subject of a finite verb is in the nominative case."

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[1] Copyright, 1888, by Eastern Educational Bureau.

The organization of the school demands our attention, yet too rigid a classification may be attempted. A child may be able to read in the first class, but may not be able to do the work in arithmetic that the other members of that class can do with ease. This is the case quite frequently. Such an one may recite in one class in one study and in a higher or a lower class in another. Parents will urge the teacher to allow the child to go into a "higher class." There will of necessity be many pupils of different degrees of advancement. They may be grouped. One is beginning the study of arithmetic, another has studied the fundamental rules and is ciphering in common fractions, while a third is at work upon decimals. These three pupils cannot work together, notwithstanding all the talk that is heard in relation to the need of reducing the number of classes. They may, however, form one class for work, taking their places together, in the recitation seats. The teacher will not expect them to perform the same work. Examples to be performed upon the board may be assigned the different pupils, or one may recite while the others are at work at the board, the teacher having the oversight of all. This plan of procedure does not differ essentially from that which is pursued in graded schools, when, for instance, ten pupils pass to the board to perform ten different examples. Classes in reading are of necessity small. The pupil who is able to read fluently from a Fourth Reader, derives little benefit from listening, constantly, to one who is fitted simply for the Second Reader, and there may be no class between these. The union of these classes impedes the progress of all.

Ask the upper classes at times to read for the younger ones. Let them be led to feel that they are reading to some one. The members of a small class, say of two or three pupils, take their places for reading, and possibly read as though the main object were to complete the paragraph. There will be little progress made either in an ungraded or a graded school unless the pupil feels that he is reading to some real person. The boy that rehearses at home or in the woods does it better if he can fancy an audience before him.

General exercises must be frequent on account of the different grades in one school. There needs to be a feeling among the pupils that it is one school, that there are common interests. This feature was overlooked too much by many of us, who were once teachers in these schools. We can appreciate now the value of these general exercises. The old time practice of asking all the pupils, or as many as wished to try, to perform examples in the fundamental rules was beneficial. They acquired by this practice the ability to add and subtract readily. The older and the younger ones vied with one another in this work. There was a proficiency in this study that was appreciated. The teacher must study here to be "fertile in expedients." The exercises, if conducted properly, furnish opportunity for each pupil to work. An outline of some exercise will serve as a guide to the young teacher, who will be able to elaborate a method adapted to the classes under his charge. Drill exercises in arithmetic may be given the school as a whole, the little ones can add 3, 2, and 1, another class can add a column of 10 or 12 figures, others can annex one or more figures so that the column will read 32, 24, 13, or 132, 425, 612, etc. Exercises similar to these can be placed upon the board and classes of various degrees of attainment can work at the same time, under the supervision of the teacher, the work being inspected at his convenience. Some of the older ones can examine the slates belonging to the younger ones. This is good practice for them. The experience is valuable. An opportunity for thinking is afforded in the working of the examples that are dictated and also in other written exercises. Dictate examples that require more thinking and less mechanical labor on the part of the pupils, as "John and James both have 40 apples, but John has four times as many as James; how many has each?" Very little time is required in which to place such an example upon the slate or the paper, as few figures are needed, provided the operation is understood. Their pencils should remain untouched until the example has been wrought mentally. Attention paid to this point will render the exercise more efficient.

Written exercises must be frequent and varied in order to find employment for all the classes. Arithmetic as it is taught in our primary grades forms a basis for work in these schools. The slate work done in them can to some extent be done in the district school. Combine as much as possible in one question; e. g., send a letter saying that the money is enclosed to pay for a gallon and a pint of milk. This tests the penmanship, spelling, use of capitals, forming of sentences, etc., notwithstanding it is designed primarily for an arithmetical test.

In ungraded schools, pupils are compelled to rely largely upon their textbooks. There are so many classes, the teacher has not the time for explanation that teachers in graded schools have at their disposal. This is not, of necessity, such a serious disadvantage as might be supposed, but it compels the teacher to emphasize the importance of the ability to use the textbook. Although the spelling lesson is studied there may be words mispronounced by the pupil. The diacritical marks must be learned so that the pupil may be able to pronounce at sight the word he finds in the dictionary. Sufficient attention is not always paid to this point, even in the graded schools, and as a result pupils in the higher classes are not able to pronounce correctly many words that occur in their every-day work. Let any teacher test the classes by writing upon the board, — alternate, inherent, comparable, address, Herculean, interpolate, obligatory, legislature. Ask the pupils to refer to the dictionary and then to pronounce the words. Accentuation and syllabication are subjects that deserve attention. They must be studied in connection with the reading lessons. It is essential that the pupil understand them so that he may be able to pronounce correctly a word he finds in the dictionary. Certain questions for examination should make prominent these points. These questions are submitted not for the purpose of testing the pupil's fitness for promotion, but for the purpose of aiding them in their work. Reading lessons should be assigned for pupils to study. The words that cannot be pronounced may be written upon the slate and attention called to them before beginning the regular reading lesson. This aids the pupils in their attempts to pronounce and to define words.

One important reason for not telling a child everything is that, by compelling him to find out for himself, the educator exercises and strengthens the discovery or inventive faculty.—SULLY.

METHODS IN GEOGRAPHY.[1]

BY LARKIN DUNTON, LL. D., AND MISS L. T. MOSES.

XII.

NATURE LESSONS — SECOND YEAR.

The Dew.

IN the second year, as in the first, the time and place of the dew is to be observed, but with more attention to the time, conditions, and manner of its disappearance. The varying amount of dew in different places and under different conditions is to be the object of especial observations this year. Some attention is to be given to the nights unfavorable to the deposition of dew, in preparation for the third year's work, when the relation between clear, still nights with heavy dewfall, and cloudy or windy nights with no dew, is to be noted.

The study of the relations of special places to the more or less copious deposition of dew must be largely done by the children at home and on the way to school. These home observations should be supplemented by observations in and about the school grounds. under the teacher's direction.

The teacher decides on a night when the meteorological conditions promise a heavy dewfall. Before the children go home, she tells them that she thinks there will be much dew in the morning; and she thinks they will see a most beautiful sight, if they will look out over the meadows and trees as soon as they get up in the morning. She tells them that she likes to look at the dew as soon as possible after sunrise, for at that time the rays of the sun strike straight across the fields and meadows, and turn even the tiniest dewdrops into jewels which shine brighter than diamonds.

The teacher adds that the sight of the dew-jewelled fields always makes her glad; that she believes these diamonds more precious than those which cost so much money; because she

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[1] Copyright, 1887, by Larkin Dunton and L. T. Moses.

always thinks of them as belonging to herself, to them, her children, and to every one, poor as well as rich. She says that she always thinks they are the jewels which the Good Father gives at the beginning of the day, so that his children may think of Him, and begin the day with joy and beauty.

The children resolve to see and enjoy these millions of diamonds the next morning. The teacher then says: "After you have seen the beautiful meadow spangled with dewdrops, and have looked till you feel happy at such brightness, and have been so glad for all these jewels shining for you that you have remembered to thank our dear Father for giving you all this brightness and gladness, will you look once more, till you know that with your eyes shut you can see it all? Will you shut your eyes and try to see the trees and fields shining in the sun, the dewdrops, each one sending forth its brightness, and the blue sky with its clouds and sunshine?

"There are some other things I want you to see for me, and I am going to make it a little hard for you, because I want to know how bright and clear your eyes are, and how steadily and carefully you are learning to see what is about you.

"I want you at first to try to find whether there is more dew in any other place than on the grass; and you will have to be very, very careful. Then I want you to see if there are any places on the grass itself where there is no dew. This will be quite hard; but I have seen such places myself, and I want you to see all I have seen and even more, if you can. I would like, also, for you to find any places you can, that have less dew than the grass."

The children come to school the next morning ready and eager to tell the teacher of all they have observed. Before the school begins the teacher herself goes out and begins to observe the dew on the grass. She tells the children what she is doing, and allows them to come with her. She goes under a tree with thick foliage, if there be one near, and stoops down and feels the dry grass with her hand. The children eagerly test the grass in the same way. If there is a cobweb over the grass, as there will be in late summer or early autumn, the teacher carefully examines the grass under the cobweb, and the children do the same.

At the beginning the teacher has told the children that she is not going to tell them what she finds; but that she is looking for some things in regard to the dew on the grass; and that they may look with her, if they are willing to look and think, but not talk of what they see just yet. So all silently examine together.

After the beginning of school, when the time for the lesson comes, the children first shut their eyes and try to see the field as they saw it early in the morning. They then tell of the countless shining dewdrops, of the clouds, the trees, and the glorious beauty of the morning. They next tell of their thoughts concerning the dew's likeness to other beautiful things, of their gratitude to the Giver of it all. Then the teacher reads some beautiful selection. The following poem is suitable for children of this grade:

DEWDROPS.

Dewdrops, shining fresh and fair
  On the grass and flowers;
Are you gems both rich and rare,
  Come from heaven in showers?

Are you tears the flowers shed,
  For the sun's rays pining?
Or bright stars from overhead,
  Back to heaven's stars shining?

Do the fairies place you there
  For their own good pleasure,
Giving us this beauty rare,
  Beauty without measure?

Gems, or tears, or stars of light,
  Or gifts the fairies send us,
Flowers, like diamonds, shining bright
  Which the still nights lend us,

We and all the flowers fair.
  Trees by brook or river,
Love you for your beauty rare,
  Love and praise the Giver.

The children are now led to tell where there was most dew; and nearly all agree that there was more on the grass than in any other place. Should this not be the case, they are directed to look again. But in case nearly all are right, the teacher is pleased with their careful investigation, and expresses herself so.

In regard to the relative amount in other places they differ materially and are directed to look again at only two of the places about which they differ, as in the relative amount on a plank or a brick walk. These investigations are followed day after day, until the children know the facts from their own observations.

The teacher now asks the children to tell what they found when they were looking with her before school. One child says, "I found the grass quite dry under the trees, while just outside it was very wet." Another says he found it quite dry under one large tree at home and pretty dry, but not quite so dry, under another.

The teacher finds that many of the children, in addition to finding the grass dry under the tree when they looked with her, found dry grass under trees at home. While some found dry grass under some trees, and grass quite wet or nearly dry under other trees.

The teacher says, "Since you have found dry and wet grass under different trees, I think you will want to look another morning and see if there is any difference between the trees that keep the dew from falling and those that do not." One child thinks he knows already, but the teacher says, "Not now, Fred; if you tell us now, we shall not have the pleasure of finding out for ourselves. So we will all try to find this out for tomorrow."

"Now," says the teacher, "what else did we look at this morning? Each of you think a moment." After a moment an eager child is called upon and says, "The grass under the cobwebs was dry."

"I feared you had not thought long enough, Jenny, to tell all we saw. Who can tell it all?" says the teacher.

Many hands are raised and the child called upon, says: "I saw all the dew in bright drops on the cobwebs. They looked like lace with diamonds sewed on it; and then I looked at the grass under the cobwebs, and it was perfectly dry. I put my finger under one side and did not feel any wet."

The children agree that the whole story is told and well told; as does the teacher.

This kind of work will furnish the children with the various facts in connection with the deposition of dew, and will enable them, when they have come to the reasoning stage of education, to be accurate in their theories, as far as knowledge of the facts will help to make them so.

When the cold weather comes on the frost is treated in the same way. The children observe the time of its formation, and the different amounts on different substances, as they did in connection with the dew.

They observe and experiment in reference to the late flowers in their gardens, and find how slight a covering will protect the delicate plants from the early frosts. They compare this covering with the cobwebs which kept the dew from the grass, and they wonder if this thin covering so near the plants keeps them from the frost in the same way that the cobweb keeps the dew from the grass. Then they wonder if the tree acts as a covering for the grass and flowers in the same way.

In connection with the frost, its beauty, as it sparkles on the grass, and, later in the year, as it covers not only the ground but the fences, trees, and even the smallest twigs upon them, is observed and admired. A morning when all objects are frosted is one to study for a vivid picture, to study till it can be perfectly represented. Such beauty is a valuable part of the mental furnishing of the young.

On suitable mornings the frosty window pane should be studied with the varied and beautiful pictures upon it. The children should be encouraged to see whatever likeness lies in these pictures to the starry sky, to fern-covered dell, to rocky chasm, to babbling brook, and to all beautiful forms in nature and in art.

There are many poems adapted to please and help children of this grade; and among them this is always a favorite: —

WINTER JEWELS.

A million little diamonds
  Twinkled on the trees,
And all the little maidens said:
  "A jewel, if you please!"

But while they held their hands outstretched
  To catch the diamonds gay,
A million little sunbeams came
  And snatched them all away.

"THE one serviceable, safe, certain, remunerative, attainable quality in every study and every pursuit is the quality of attention. My own invention, or imagination, such as it is, I can most truthfully assure you, would never have served me as it has but for the habit of common-place, humble, patient, daily, toiling, drudging attention." DICKENS.

PRACTICAL METHODS OF TEACHING SPELLING.[1]

BY ANNA B. BADLAM,

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V.

GRADED LESSONS FOR ORAL AND WRITTEN SPELLING. (CONTINUED.)

General Direction.—1. Have each word pronounced, sounded, and spelled. 2. Have each word used in a sentence. 3. Have each word copied upon the slate. 4. Keep a list of the sentences which have been used orally and write them upon the board for a reading lesson later in the day; have these sentences copied upon the slate. 5. Use these same sentences for dictation exercises at the end of the week.

UNION OF NG.

Lesson 22. The initial letter changes. *A* short.

sang rang clang

hang bang

Lesson 23. The final letter changes. *A* short.

sang hang

sank hank

clang

clank

rang bang

rank bank

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[1] Copyright, 1888, by Anna B. Badlam.

Lesson 24. The middle letter changes to ĭ, ŏ, or ŭ.

1.

sang	hang	rang	bang	clang
sing	—	ring	—	cling
song	—	—	—	—
sung	hung	rung	bung	clung

2.

sank	hank	rank	bank	clank
sink	—	rink	—	clink
sunk	—	—	bunk	—

Lesson 25. The initial letter changes. *I*, *O*, and *U* short.

song	sing	ring	sung
gong	wing	bring	hung
long	thing	string	lung

Lesson 26. The final letter changes. *I* short.

1.

sing	wing	thing	bring
sink	wink	think	brink

2. The effect of final *E*.

sing	rang
singe†	range†

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† G like J.

Lesson 27. The middle letter changes.

think	string	lung
thank	strong	long

UNION OF SH—FINAL.

Lesson 28. The initial letter changes. *A* short.

ash	rash	lash
dash	crash	mash

Lesson 29. The middle letter changes to ĭ or ŭ.

dash	rash	crash	mash
dish	rush	crush	mush

Lesson 30. The initial letter changes.

dish	rush	thrush
wish	brush	gush
fish	crush	hush

UNION OF SH—INITIAL.

Lesson 31. The middle letter changes to ĕ, ŭ, or ĭ.

shad	shall	shin	ship
shed	shell	shun	shop

Lesson 32. The effect of final *E*.

shad	shin
shade	shine

Lesson 33. The final letter changes.

1.

shop shad
shod sham
shot shag

2.

The effect of final *E*.

sham shame

Lesson 34. The initial letter changes. *A* and *I* long.

shade	shame	lame	shine	dine
blade	came	blame	mine	wine
made	name	flame	line	fine

UNION OF CK.

Lesson 35. The initial letter changes. *A* short.

back lack pack
tack hack stack

Lesson 36. The middle letter changes to *ĕ*, *ĭ*, *ŏ*, or *ŭ*.

back	tack	lack	stack	pack
beck	—	—	—	peck
—	tick	lick	stick	pick
—	tock	lock	stock	—
—	tuck	luck	stuck	—

UNION OF CH—INITIAL.

Lesson 37. The final letter changes. *I* short.

chip chick chink
chin chill

Lesson 38. The middle letter changes to *ă*, *ĕ*, or *ŭ*.

chip chick
chap check
chop —

UNION OF CH—FINAL.

Lesson 39. The initial letter changes. *U* and *I* short.

much rich
such niche†

† **Exception to the general rule for final *E*.**

UNION OF CH—FINAL WITH SILENT T.

Lesson 40. The initial letter changes. *A* short.

catch match hatch
patch latch batch

Lesson 41. The middle letter changes to *ĭ*.

patch hatch
pitch hitch

Lesson 42. The initial letter changes. *I* short.

pitch witch stitch
ditch switch twitch

UNION OF LL.

Lesson 43. The initial letter changes. *E* short.

bell well fell
tell sell dell

Lesson 44. The middle letter changes to a̱, ĭ, ō, ŏ, ụ.

bell	tell	well	sell	fell	dell
ball	tall	wall	—	fall	—
bill	till	will	sill	fill	—
boll	toll	—	—	—	—
bull	—	—	—	full	—

Lesson 45. The final letter changes.

bell ball till toll boll will sill
belt bald tilt told bold wilt silk

EDITORIAL.

THREE REMOVES BUT NO FIRE.—This office was moved from 3 Somerset street to 50 Bromfield street, December 1st, 1886. We first secured room No. 10, the smallest of all the rooms on the floor. Nine months later No. 10 was exchanged for No. 14, which was much larger. This office from time to time, as the number of clerks and desks increased, appeared to grow smaller. The editor and one clerk did all the business at first in No. 10. Then a second clerk, or bookkeeper, was needed, then a proofreader, a little later a subscription clerk, then the Teachers' Agency required a manager, an office boy was a necessity, and finally a business manager was indispensable. The business having entirely outgrown the capacity of No. 14, that office had to be abandoned and larger accommodations must be sought. But No. 50 Bromfield street is too good a location, the building is too choice a one, the landlord is too obliging, the tenants too good neighbors, to make a remove from this location at all agreeable to think of. No. 14 has kept us as long as it was possible for us to stay without overflowing, by either an occupancy of the adjoining hall or hanging out of the windows.

But patient waiting has had its reward. Mr. Holt's Normal Music Hall, No. 8, was the largest room upon the floor, and that, being vacated for more commodious quarters elsewhere, has been thoroughly fitted up to accommodate the growing business of the Eastern Educational Bureau. No. 8 has now been divided into three rooms, with a large space for merchandise and packing. The main office is large, airy, and convenient. It has a cheerful lobby cut off from the counting-room by a rail and gate, a counter, large bins for books, and a roomy closet for maps and charts. The main office, or counting-room, has six desks, a Caligraph and a Remington type-writer, a long table for the display of our books and magazines, a reading desk filled with our educational exchanges, and a large, handsome case for samples of our wall maps. Space will permit only a brief mention of the editor's room and a consultation room for the Teachers' Agency, with large book-cases filled with the choicest educational literature, reference books, atlases, etc. We shall be glad to show our new quarters, with all their attractions and conveniences, to every one of our subscribers.

Here we shall have better accommodations for the easy and rapid transaction of our business than has been hitherto enjoyed. With six other educational establishments in the same building this may very properly be considered, what many now regard it, the "*Educational Headquarters*" of this city.

Thanking our numerous patrons for past favors and respectfully soliciting their patronage for the future, it will be our determination to furnish to teachers and educators of all grades the best aids and the most important means of improving the teaching in our schools possible.

EDUCATORS have by no means been unmindful or unobservant of the great work already done by that wonderful invention, the type-writing machine. It is a great time saver, and from a convenience in doing business it is rapidly coming to be a necessity. The recent contest between the rival machines by which the fact has been established that an expert type-writer will equal in speed the rapidity of an ordinary, or even an excellent stenographer, has filled many minds with amazement. It is certainly astonishing that the mind can be so trained by practice that the hand will make ten distinct and separate movements in each second of time, and that a practised type-writer can record in clear type upon paper one hundred words and more per minute. It is still more surprising that a complicated machine can be constructed with such precision and nicety of movement that its operations, so quickly performed, shall be at once correct and exact.

But educators should concern themselves with still further questions in regard to this wonderful machine. It is fast coming to be seen that the use of the type-writer in grammar and high schools is the best possible method of teaching the mechanical construction of sentences and certain important factors of English composition. Many of our best public and private schools have within a year or two past introduced the type-writer as an important educational adjunct to their school work. It can be used with great advantage in any grammar or high school in teaching English composition, and many teachers believe that there is no better, quicker, or easier way of teaching accuracy of spelling, punctuation, the use of capital letters, and paragraphing than by the use of the type-writer. The expense only deters many from bringing this educational device into practice, but, if rightly considered, this should not stand in the way of the early use of the machine, in any good high school or grammar school. It can be used by twenty-five pupils. The cost of the first-class machines is one hundred dollars or less. This makes, even for one year, a cost of only four dollars for each pupil. But the machine may be used by ten successive classes, thus reducing the actual cost to forty cents per pupil. Many of our best teachers who have used the instrument in their schools believe that before many years the type-writer will be as indispensable to a good school as the dictionary and cyclopædia now are.

"WHEN I was a pupil I used often to wish some one would tell our teacher not to get nervous." This was what a very intelligent lady said to the writer today. If all teachers would always keep a guard over their manner and never appear to be nervous, excited, or angry, they would enjoy life better, live longer, and do more good in their day and generation.

"O DEAR me," said a little girl on returning home from school one day, "I do wish my teacher would not make fun of us." Ah! dear teacher, are you aware how sarcasm cuts and hurts, and how seriously the spirit is often wounded by sarcastic remarks. Surely, sarcasm is a dangerous weapon, and should be used *never*, in the school room.

HAPPY HOURS.

THE CHILD'S WORLD.

Great, wide, beautiful, wonderful world,
With the wonderful water round you curled,
And the wonderful grass upon your breast —
World, you are beautifully drest!

The wonderful air is over me,
And the wonderful wind is shaking the tree,
It wakes on the water, and whirls the mills,
And talks to itself on the tops of the hills,

You friendly Earth! how far do you go
With the wheat fields that nod and the rivers that flow,
With cities, and gardens, and cliffs, and isles,
And people upon you for thousands of miles?

Ah! you are so great, and I am so small,
I tremble to think of you, world, at all;
And yet, when I said my prayers today,
A whisper inside me seemed to say:

" You are more than the earth, though you are such a dot:
You can love and think, and the earth cannot!"

— ***Lilliput Lectures.***

THE SORROWFUL SEA-GULL.

The sea-gull *is* so sorry!
  She flings herself about,
And utters little wailing cries,
  And flutters in and out.
The fishes do not sympathize —
  Fish are so very cool!
They make so many rules, you know;
  And who can *feel* by rule?

They have a rule for swimming,
  A rule for taking food;
They have a rule for pleasure-trips,
  A rule for doing good.

And people who make rules like that
May drive, and work, and swim,
But never know how sweet a thing
It is to take a whim!

I'd like to be a sea-gull,
With lovely beak and claws;
I would not like to be a fish,
Subject to fishy laws.
And if they make more changes soon
By acts of Parliament,
I won't consent to be a fish —
I *never will* consent!

Why is the sea-gull sorry?
I'm not allowed to tell.
The fish, who will not sympathize,
Know what's the matter well!
And you, who feel with all your hearts,
And give her love and tears,
Are not allowed to hear a word;
And such is life, my dears!

— *Selected.*

THREE TRUSTY BLADES.

"I'll Try," is a blade that will win its way
Through many a hard wood knot —
Will patiently seek for the surest path
To reach a coveted spot.

"I can" is a word both trusty and true,
Which wins when others have failed;
Its temper is perfect, its edge is keen,
Its lustre has never paled.

"I will" is an axe which will cleave a road
O'er all that impedes its way;
The timbers must yield and the oaks must fall
Wherever it holds its sway.

With three trusty blades and a heart of cheer.
What boy but can climb at last
The hill of success to its topmast height,
And smile o'er the journey past?

— *Selected.*

WOOD-NOTES FROM A CAGE.

What — what — what there, my pet canary?
What are you trying, my town-bred bird?
You, whose performance used never to vary!
Ah, I can guess at the rogue you 've heard!

Day after day, in your bright brass dwelling,
You lived in comfort; you took your dip;
Your cup ran over with seeds for shelling;
Your dear delight was a celery-tip.

Primly and trimly you sleeked your feathers;
To swing in the ring you considered bliss;
And you sang, sang, sang in all seasons and weathers,
With a swelling throat, such a song as this:

" Sweet, sweet, sweet,
Seeds — to — eat!
Swee-eet!
Just — hear — me — trill like a rill, rill, rill, rill!
Sweet, sweet, sweet!"

But away at the farm-house last July, sir,
Don't I know who, in the dawn and dew,
Came, like a flame, to the branch near by, sir,
Flashing, and dashing, and taunting you?

Who but the Oriole, orange and sable?
Brilliant Lord Baltimore, velvety-necked,
Whistling out clear, through the morn's gay babel,
Something to this provoking effect:

" You 're caged I see. 'T is n't fair, but *I* don't care!
I'm free, free, free! Oho, it 's rare,—and *I* don't care!"

" Free!"—You listened, and learned his meaning!
Shadow and meadow and breezy tree,—
Cherry and berry,— flitting and gleaning, —
Mating and building, —
" Oh, free, free, free!"

And now you repeat, though a trifle queerly,
That nonchalant melody, o'er and o'er,
And persuade yourself — or so very nearly! —
You are quite as content as you were before:

" —— 'T is n't fair, but *I* don't care!
—— *I* don't care!"

— *Helen Gray Cone, in St. Nicholas.*

THE STUDY OF SYNONYMS.

SIN, CRIME, AND VICE.

1. SIN is derived from the Anglo-Saxon.
   CRIME is derived from the Latin.
   VICE is derived from the Latin.
2. All three refer to violation of law.
3. SIN is the generic term embracing wickedness of every kind, but specifically denoting an offence as committed against God.
   CRIME is strictly a violation of law, either human or divine; but in present usage the term is commonly applied to actions contrary to the laws of the state.
   VICE is more distinctively that which springs from the inordinate indulgence of the natural appetites, which are in themselves innocent. Murder and forgery are termed CRIMES, while intemperance, duplicity, and unchastity are VICES.
4. "I think it no SIN to cozen him."
   "If you bethink yourself of any CRIME, unreconciled as yet to heaven and grace, solicit for it straight."
   "No VICE so simple but assumes some mark of virtue on its outward parts."

SLIGHT AND NEGLECT.

1. SLIGHT is derived from the German.
   NEGLECT is derived from the Latin.
2. Both mean to disregard.
3. To SLIGHT is stronger than to NEGLECT. We may NEGLECT a duty or a person from inconsideration or from being over occupied in other concerns.
   "To SLIGHT is always a positive and intentional act, resulting from feelings of dislike or contempt."
4. "We ought to put a kind construction on what appears NEGLECT on the part of a friend; but when he SLIGHTS us, it is obvious that he is our friend no longer."

SPITE AND MALICE.

1. SPITE is abbreviated from despite, and is derived from the Latin.
   MALICE is also derived from the Latin.
2. Both refer to hatred and malignity.
3. MALICE has more reference to the disposition, and denotes a spirit which desires evil to others.
   SPITE has reference to the manifestation in words and actions, and is a temper which delights to express itself in bitter and cutting language, or in low and irritating actions.
4. "Be it for nothing but to SPITE my wife."
   "God turn their hearts; I never sought their MALICE."

STATION AND DEPOT.

1. STATION is derived from the Latin.
   DEPOT is derived from the French.
2. Strictly speaking, these two words are not synonymous.
3. STATION is the spot or place where anything stands, hence the place where railroad trains regularly come to a stand.
   DEPOT means simply a storehourse or magazine.
   It is unfortunate that in the United States the stopping places on railways first received the name of depots. In England the name has always been STATION or STATION HOUSE, and there is now a growing tendency to correct this mistake, and to adopt this in the United States as the only proper word.
4. Many local trains stop but a short time at the STATIONS.
   The wagon was backed up to the DEPOT to receive the goods that had been stored there.

EXAMINATION QUESTIONS.

ARITHMETIC. CLASS I.

1. What are the prime factors of 126, 252, 125, 288?

2. A merchant sold $\frac{2}{3}$ of $\frac{1}{5}$ of a ship to one person, and $\frac{3}{4}$ of $\frac{11}{12}$ to another. What part of the whole ship had he left?

3. What number is that, from which if you take $\frac{1}{4}$ of itself, the remainder will be 15?

4. Find the G. C. D. of 160, 240, 960.

5. Multiply six-tenths by seven hundred and forty-four ten-thousandths.

6. How many acres in a field $54\frac{1}{2}$ rods long, and 26.4 rods wide?

7. Gloucester, England, is 2 deg. 14 min. West Longitude; Gloucester, Mass., 70 deg. 39 min. West Longitude; what is the difference in time between the two cities?

8. Explain what determines the length of a meter.

9. What are the solid contents and the surface of a sphere having a radius of 9 feet?

10. Multiply the third power of $\frac{1}{5}$ by the square of 11.

11. What is the distance between the opposite corners of a square field containing 40 acres?

12. What is the Metric System? Where is it in use? What advantages has it over any other system?

13. A bin 16 feet by 12 feet by $8\frac{1}{2}$ feet will hold how many bushels of grain?

14. A note for $320, dated May 5, 1882, payable in 90 days, with interest at 5 per cent. was discounted 18 days after date, at 6 per cent.; what were the proceeds?

15. Marked some goods at 40 per cent. above cost, but sold them at 20 per cent. less than the marked price, and gained $288. What was the cost of the goods?

16. Explain how multiplication is an abridged form of addition, and division an abridged form of subtraction.

17. The original national domain contained 820,680 square miles; the Louisiana purchase added 899,579 square miles; the Florida purchase, 66,900 square miles; the Oregon treaty, 308,052 square miles; annexation of Texas, 318,000 square miles; Mexican treaty, 522,955 square miles; Gadsden purchase, 45,535 square miles; Alaska purchase, 577.390 square miles. What is the extent of our territory today? Making use of the present number of states and territories, find the average of each division.

18. What is the short method of multiplying by 12½? by 25? 33⅓? 50? 125? 3⅓? 99? 333⅓?

19. Find the interest by the twenty-month method of $365.75 for 2 years, 3 months, 19 days, at 5 per cent.

20. On a separate piece of paper, of proper size, write a negotiable note for $400, payable on demand with interest at 6 per cent. Select names. Make endorsements as follows: March 4, 1882, $45; May 10, 1883, $60; June 6, 1885, $90. Find what was due January 12, 1887.

ARITHMETIC. CLASS II.

1. A merchant wishes to borrow $4935.50 at a bank. For what sum must he write a note payable in 90 days at 5 per cent. discount to obtain the money?

2. A man sold $6000 worth of United States currency 6's at 115, and invested the proceeds in Indiana 5 per cent. bonds at 120. What was the change in his annual income?

3. How large a draft payable 60 days after sight can be bought for $3505, exchange being at ½ per cent. premium, and interest at 5 per cent.?

4. What fraction in its lowest terms equals .00096?

5. How many tiles 1 foot square in a floor 44 x 75 feet?

6. A can build a fence in 14 days, B in 25 days, C in 8 days, and D in 20 days. How long will it take them if they work together?

7. A merchant sold 2 boxes of soap for $60 each, on one he gained 20 per cent., and on the other he lost 20 per cent. Did he gain or lose by the transaction, and how much?

8. Find the proceeds of a 6 months' note for $500, dated May 3, 1876, discounted July 8, at 7½ per cent.

9. I have John Cogswell's note for $150, dated July 7, 1878. What is due Sept. 25, 1881, at 6 per cent.? Use the twenty-month method.

10. If it cost $30 to paint the outside of a house 40 feet long, 30 feet wide, and 25 feet high, what will it cost to paint the outside of a house 50 feet long, 40 feet wide, and 20 feet high?

11. The interest of $908 at 3½ per cent. was $79.45. What was the time?

12. What sum invested at 5 per cent. will yield an annual income of $900?

13. Explain the use of the draft in business, and draw a draft in Gloucester payable in New York.

14. What will it cost to plaster the walls and ceiling of a room 18 feet long, 16 feet wide, and 10 feet high, at 33 cents a square yard, allowing 28 square yards for doors and windows?

15. The town of A is taxed $10,999. The real estate of the town is valued at $500,000 and the personal property at $300,000. There are 666 taxable polls, each assessed $1.50. What is the tax on $1? What is B's tax whose real estate is valued at $4000 and his personal property at $8000, and who pays a poll tax?

16. Suppose you had worked for Proctor Bros. for 3 weeks at the rate of $3 a week. Write the bill which you would present. Receipt it.

17. An insurance of $3000 for 5 years was effected on the books and apparatus of the Gloucester High School, at a premium of $67.50. What was the rate of insurance?

18. The premium of $67.50 for the above insurance was paid the 9th of December, 1886, and the building was burned May 11, 1887. The company agree to pay a loss of $1440 at the end of 60 days. If money is worth 5 per cent., what is their actual loss?

19. What is the cost of sawing a pile of wood, 16 feet long, 4 feet wide, and 6 feet high, at $1.12½ a cord?

20. Write a negotiable note; a receipt in payment of a bill.

ARITHMETIC. CLASS III.

1. Find by aliquot parts: 66⅔ per cent. of $10,281; 8⅓ per cent. of $8,091; 12½ per cent. of 1,936 men; 16⅔ per cent. of 1,944 acres; 6¼ per cent. of 48 pounds.

2. Reduce ⅞ of a mile to integers of lower denominations.

3. At $1.90 per yard, what will it cost to carpet a room 18 feet long, 15¾ feet wide, the carpet being ¾ yard wide?

4. Bought 52 shares of railroad stock at 127. Sold 36 shares at 135, and the remainder at 137½. What was gained by the transaction?

5. At $4.84 per cord, what will be the cost of a pile of wood 32 feet long, 8 feet wide, and 6½ feet high?

6. Expended $23 of my money for clothes, $35 for board, and had left $84. How much had I at first?

7. If my goods sold for $250, yielding a gain of $75, what was my gain per cent.?

8. How many bins, each holding 63 bushels, 1 peck, will be required to hold 885 bushels, 2 pecks of potatoes?

9. My agent receives ½ of 1 per cent. commission. How many yards of cloth at $1.25 per yard may he purchase with $502.50, after deducting his commission?

10. My house is insured for five-eighths of its value at 1½ per cent. The premium paid is $19.20; what is the value of the house?

11. A room is 25 feet long, 20 feet wide, and 9 feet high. What is the square surface of the walls, ceiling, and floor?

12. Find the cost of plastering the above room at 25 cents per square yard?

13. For how much must I sell goods that cost $675.37, to gain 33⅓ per cent.?

14. Sold a horse for $375, and lost 25 per cent.; what was the cost of the horse?

15. What is the premium upon a house valued at $3,240, if insured for two-thirds of its value at ¾ per cent?

16. A school enrolls 230 boys, which is 15 per cent. more than the number of girls; what is the number of pupils in the school?

17. Find the G. C. D. of 64, 160, 320.

18. Write five hundred, and fifteen hundred thousandths.

19. Divide the product of 7,912 x 68,562 by 31.06.

20. What is arithmetic.

GEOGRAPHY.

1. What and where are the following: Sandy Hook, Balize, Aspinwall, Gila, Corientes, Victoria, Hood, Yukon, Melville and Southampton?

2. Name all the states drained wholly or in part by the Ohio and its tributaries?

3. Describe the climate of that part of the United States west of the Sierra Nevada mountains.

4. How was Alaska obtained? When? Is the territory organized? How is it governed? Who are the inhabitants?

5. Name the three leading states in wool-growing. What part of the United States is best adapted to grazing? Locate the lead mines in the United States.

6. Name four rivers of South America; two lakes. Four cities on the Pacific coast.

7. What separates Ireland from Scotland? Ireland from Wales? England from France? What islands north of Scotland? Name an island in the Irish sea. Name three most important minerals in Great Britain. What mountains separate France from Spain? To what country does Candia or Crete belong? What is the longest river in Europe? Name three mountain ranges of Europe.

8. Why is northern Africa so dry? Is the desert of Sahara above or below the level of the sea?

9. Of what country are rice, tea, cotton, and silk great staples? What form of government has Japan? In what ocean is Australia? To what country does it belong? What are its divisions? Name four islands crossed by the equator.

10. Where is the great lowland plain of Asia? Where are the llanos? The selvas? Where is the chief highland belt of Europe?

EXERCISE IN ENGLISH.

1. Rearrange the following sentence in as many ways as possible without destroying the sense, and give your opinion as to the effect of each change:—

He spoke of this afterwards to my surprise with warm interest.

2. Change to direct narrative:—

His father, on parting from him, exhorted him to behave well, adding that he hoped to live to see him a captain. To this the brave boy replied that if he did not think he should come to be an admiral he would not go at all.

3. Change to indirect narrative:—

"If that be the case," replied their father, "you certainly shall not go, but make another attempt and I will leave it to your honor. If you find that it is really dangerous you may return."

4. Give examples illustrating all the different relations in which a noun clause may stand to the rest of a simple sentence.

BOOK NOTICES.

A HISTORY OF THE UNITED STATES AND ITS PEOPLE. For the Use of Schools. By Edward Eggleston. New York: D. Appleton & Co. 1888. Pp. 398.

The schools owe much to the publishers for the attractiveness of textbooks. It is a question whether we are not putting upon them too lavish a finish, and and spending too much money in their make-up. But it is certain that some of them are simply sumptuous. Among such must surely be reckoned this new applicant for the favor of the public. Text and type, illustrations and colored plates, maps and portraits, paper and printing—all are superb.

But it is in the author's work after all, that the book excels. In clearness of style and vivacious interest it is superior, yet the chief charm of the book is in its contents. The great facts upon which our success as a nation has depended form the skeleton, but the flesh and blood are the graphic portrayal of the manners and habits and customs of the people, so skillfully and enticingly displayed. The arrangement of topics so as to keep the student's attention and exhibit cause and effect and the progress of civilization is admirable. The history and development of civilization are kept constantly before the pupil. The invention of the steamboat, railroads, the telegraph, the telephone, the growth and expansion of our country, the increase in the comfort of our people, the uses of labor-saving machinery, all are topics so admirably brought out as to interest and instruct the pupil to a far greater extent than would be possible with the most graphic accounts of the battles of Palo Alto and Cerro Gordo. It is eminently a teaching book and its maps are numerous, well executed and admirably calculated to give "a geographical body to an historical soul." The illustrations are part and parcel of the teaching apparatus. Illustrations of costumes, manners, implements, arms, jewels, vehicles, and inventions are valuable in proportion to their truthfulness. Doubtless these have cost the author quite as much labor and study and research as the text itself. The study of our institutions, our government, the Constitution, is made prominent. The biographical sketches placed in separate type in the body of the page are vastly more important and useful than if put in a subordinate position at the bottom of the page. This book is strongly to be commended to all teachers of American history.

OUR YOUNG FOLKS AT HOME. III. Boston: D. Lothrop Co. Price, $1.00.

"Our Young Folks at Home" is not a book to be read and then thrown aside and forgotten. The boy or girl who reads it carefully will be much the wiser for it, and not only better able to understand the world about him but, also, will be aided thereby to make his way successfully through it. Many important hints about a business education are here given the boys, and the girls will learn a hundred things about the house which will be of great service to them. The book is for young folks of from twelve to sixteen years of age, is handsomely illustrated, and one that the young people will greatly prize.

LIVE TOPICS IN EDUCATION. No. 1. Ought Textbooks to be supplied gratuitously to all Children in the Public Schools. By Homer B. Sprague. Chicago: S. R. Winchell & Co. Price, 10 cents.

Colonel Sprague gave an address ten years ago upon this topic before the Massachusetts Teachers' Association, and another last July before the National Educational Association. They are both in this little pamphlet. The address at San Francisco has the ring of a polished orator and a sound educator.

POTTER'S NEW ELEMENTARY GEOGRAPHY. Designed for Primary and Intermediate Classes. By Eliza H. Morton. Teachers' edition. 126 pp., Quarto. Philadelphia: John E. Potter & Co. 1888.

Of making new geographies there "seemeth to be no end." This one is another "new departure." It has a teacher's edition and a pupil's edition. The teacher's edition tells "just what objects to employ in connection with each lesson," by which to illustrate that specific lesson. The teacher is evidently to do much of the preliminary work in getting the pupil interested in the subject. The physical side is made prominent. "The pupil is taught to outline each lesson by topics and to recite from the same. This gives employment and increases the power of thought."

HOW TO TEACH LANGUAGE. By Robert Metcalf, Supervisor of Schools, Boston. Boston: Educational Publishing Company. 1888. Pp. 96.

This little book by Mr. Metcalf, who has attained a high reputation as a teacher of language, contains a series of papers suggestive rather than exhaustive. From oral work it proceeds to written work, shows how to tell stories, discusses supplementary reading, dictation, pictures, letter writing, science lessons. poetry, and grammar. A wide-awake teacher will find it very useful.

BOSTON TEA PARTY, AND OTHER STORIES OF THE AMERICAN REVOLUTION. Revised and adapted from Henry C. Watson. Boston: Lee & Shepard. 1888. Pp. 222.

This is the third in a series, the preceding numbers of which are "Stories of American History" and "Noble Deeds of Our Fathers," and is called "The Boston Tea Party and Other Stories of the American Revolution, Relating Many Daring Deeds of the Old Heroes," revised and adapted from Henry C. Watson. As a book for supplementary reading, it is unsurpassed. As a book to interest young people in the story of the American Revolution, it is attractive and educating, and it will easily enough take a high place among our popular books of American history.

Among the most enterprising and successful publishers of school books for teachers are D. C. Heath & Co., Boston. Like Ginn & Co., with whom Mr. Heath was formerly associated, this young firm are outdoing themselves the present season in the number and quality of books issued. From among those recently published we find the following upon our table:—

SEASIDE AND WAYSIDE. No. 2. By Julia McNair Wright. Illustrated. Pp. 175.

This second number in the series of "Nature Readers" takes the little ones along the seaside and by the wayside, sometimes upon the hills, sometimes upon the marshes, sometimes upon the white, hard beach. It tells the children of the ant, the worm, the fly, the beetle, the barnacle, the starfish, and the dragon-fly. These stories are well written, interesting, and of great value to the children. The book is beautiful, well printed, and well illustrated.

EXERCISES IN ENGLISH ACCIDENCE, SYNTAX, AND STYLE. By H. I. Strang, Ontario.

This book consists of a great variety of exercises in English for criticism and correction. Its design is to drill the pupils orally as well as in writing in correct forms of speech, calling their attention to common errors and enlisting both ear and eye in the cause of good English. The book contains nearly fifty exercises and several thousand quotations.

Another of Mr. Heath's republications is entitled COMPOSITION AND RHETORIC BY PRACTICE, with exercises adapted for use in High Schools and Colleges. By William Williams, B. A. Pp. 238.

This is, on the face of it, a practical book; not that it excludes theory, but that it gives prominence to practice. It combines with the theory much practical work by the pupil, well arranged and systematized with sufficient explanation for the clear understanding of what is needful and what is aimed at.

TEN YEARS OF MASSACHUSETTS. By Raymond L. Bridgham. Pp. 127.

This singular little book discusses in a trenchant manner such subjects as "Public Administration," "Public Morals," "Religious Advance," "Education," "Society." The treatment of these various subjects is brief and pointed. The author sums up the progress made in the Commonwealth during the last ten years and points out its dangers. His conclusion is, that "with these dangers to its children and to its adults, it promises to be in the future the chief concern and pressing problem of the State how to raise men."

SELECTED POEMS FROM PREMIERES ET NOUVELLES MEDITATIONS. Edited by George O. Curme, A. M., Iowa. Pp. 179. Price, 75 cents.

A capital selection of French poems for school reading, with full notes and a very interesting biographical sketch of M. Lamartine.

COLLOQUIA LATINA. Adapted to the beginner's books of Jones, Leighton, Collar and Daniell. By Benjamin L. D'Ooge, M. A., Michigan Normal School. Pp. 81. Price, 30 cents.

The aim of this book is twofold, first to inspire enthusiasm at a time when it is most needed, and second, to insure increased thoroughness. The plan of the book is to present to the pupil Latin sentences under the guise of question and answer in such a way as constantly to increase the pupil's vocabulary and his knowledge of Latin construction. All needed help is given by means of notes and questions. The book is original in design and will surely prove successful in practice.

GINN & COMPANY have issued a very neat and attractive catalogue and announcement of their various and important publications. This enterprising house are publishing for teachers and the schools, almost daily, new books of rare value, and their prices are remarkably low. Their "Classics for Children" hold a high place as supplementary readers. Good literature is the great necessity for the public schools.

THE Massachusetts Society for Promoting Good Citizenship has just issued a report of great value, upon "Works on Civil Government." It gives a descriptive list of such works as are fitted for school use. It may be had by addressing Edwin D. Mead, 71 Pinckney Street, Boston.

THE Eighth Annual Report of the Superintendent of Public Schools, Boston, has some interesting chapters, which are well worth a careful perusal, especially Mr. Seaver's remarks upon Courses of Study and Promotions.

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This is based by permission upon Bigelow's edition, and the story of Franklin's life is completed from the best sources.

Cæsar's Army. By H. P. JUDSON, Professor of History in the University of Minnesota. $1.00.

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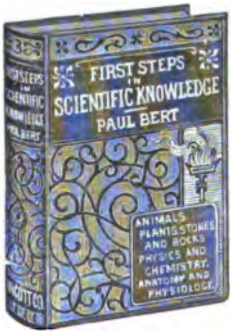

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THE PRANG EDUCATIONAL CO.

COMMON SCHOOL EDUCATION,

DEVOTED TO THE ART OF INSTRUCTION.

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TENSES IN ENGLISH.

BY PROF. EDWARD A. ALLEN, MISSOURI STATE UNIVERSITY.

THE word *tense*, in grammar, is derived through the Old French form *tens*, from the Latin *tempus*, and means *time*. But tense implies not only (1) the time of the action, but also (2) the stage of the action. As there are only three divisions of time, present, past, and future, if tense implied time only, there would be but three tenses, since every action must be referred to the present, or to the past, or to the future. But it is important also to represent the action as either continued or completed in the present, or the past, or the future; hence, we find needful two tenses for each division of time, making, so far, six tenses, viz.: present and present perfect, past and past perfect, future and future perfect. Most English grammars, following the Latin, stop here, either naming the tenses as above, or, more strictly after the nomenclature of the Latin grammar, present, imperfect, future, perfect, pluperfect, and future perfect. But the English verb has gone further than this in the development of tense-forms. From only two simple tenses, as in other Teutonic tongues, that express time by means of inflection, the present and the past — the present serving also as a future in the absence of any special form for the future — the verb has developed by the use of other verbs as auxiliaries, twelve tense-forms, two for each of the six tenses, enabling us thereby to express more delicate shades of tense than is possible to the Latin, for example. If to these be added the so-called emphatic forms, *do* and *did*, with infinitive of the verb, — though they lose their emphasis in negative and interrogative sentences, where they are chiefly employed, — the English verb can show fourteen forms for tense, as will be clearly seen in the following table: —

Tense.	Present.	Present.	I write (indefinite). I am writing (continuous). I do write (emphatic).
		Present-Perfect.	I have written (complete). I have been writing (continuous).
	Past.	Past.	I wrote (indefinite). I was writing (continuous). I did write (emphatic).
		Past-Perfect.	I had written (complete). I had been writing (continuous).
	Future.	Future.	I shall write (indefinite). I shall be writing (continuous).
		Future-Perfect.	I shall have written (complete). I shall have been writing (continuous).

It is difficult to distinguish these tense-forms by names that are wholly unobjectionable. Thus, *Perfect continuous* seems to be a contradiction of terms, but no more so than *disjunctive conjunction* and other terms that the grammarian is driven to use in order to make a distinction. *Continuous* is a convenient term to distinguish this use of the Perfect from that other use that represents the action as simply complete and nothing more. In the Present Perfect the time of the action may reach back far into the past, but the results of the act are supposed to be present, and hence it is always used with reference to the present. "A tree has fallen across the road" can be said only when the tree in whole or in part remains; it matters not whether the tree fell today or twenty years ago. The term *indefinite* is used to denote an action in an indefinite present, past, and future. What is said here in regard to the action of the verb is also true for those verbs that do not express action, but merely a state or condition.

The division of verbs, according to the formation of the past tense, into "regular" and "irregular" is unfortunate and misleading: *Sing*, *sang*, *sung; swim*, *swam*, *swum*, etc., are perfectly regular by an older law. Grimm's division into strong (irregular) and weak (regular) is more scientific, though it must be admitted that these terms are better suited to the German than to the English language, since in German the inflection *te* (*lieb-te*) adds a syllable, while the English (*e*) *d* (*e*),—(*hear-d* (*e*), *ma* (*ke*) *de*, *weaned* (*e*), *set-*(*te*) for *set-de*, *spread* (*de*), *slept*, etc.,—does not make an additional syllable in the spoken language, owing to the loss of the final *e*.

Much of the confusion in the grammars, in regard to these help-words in the formation of tenses, arises from a failure to understand the real nature of language growth. Cobbett's Grammar (ed. Ayres), for instance, says: "You will find that they (*have* and *be*) retain upon all occasions their full meaning, of possession in the one case, and of existence in the other" (p. 73); and again (p. 153), "To do is to act, and, therefore, it never can, in any of its parts, supply the place of a neuter verb." These verbs undoubtedly had, at the start, a meaning of their own, that is, they presented a notion, a predicate idea, as they now do when used as principal verbs; but in course of time, by an extension of usage, their original meaning being more and more lost sight of, they came to be regarded as mere signs of relation, the predicate notion having by degrees passed wholly out of them. Thus, from *notional, presentative* words these auxiliaries came to be more *relational, symbolic* terms. In the sentence "God is, and is a rewarder," etc., the predicate notion in the first is clearly that of existence, and the meaning is, God *exists;* but in the second predicate the notion of existence is lost and the predicate idea is *rewards*. So in "*is writing*" the idea is not *exists* writing, *is* being here a mere sign denoting continuance of the act.

In the sentence "He does well his part," *does*, of course, means *performs;* but in "You look cold and so does he," "How do you feel," etc., all notion of performance is lost, and Cobbett's stricture is seen to be groundless. "Have is have," says Shakespeare, and certainly means to possess, but in "I have lost my knife," "have sold my farm," it is not possession that is here predicated. So *shall* means *owe*, the past tense of which, *ought*, is exactly synonymous with *should*, the past tense of *shall*. It is only by conventional usage that *shall* has come to be the sign of the future—it has no future meaning of its own. Some other word might have served as well, as *become* (*werden*), used by the Germans, or *have* (*chanter-aicantare habeo*), by the French.

Will, as a verb, conveys its own meaning, but as an auxiliary of the future tense it becomes a mere symbol. When we say, "The leaves will fall in Autumn," "The limb will break, if you climb on it," we do not predicate *volition*, but *falling — breaking*, in time future to the speaker.

A brief generalization of tense signs, as in actual use, is all that was aimed at in this paper; a fuller historical treatment of the auxiliaries of mood and tense may be offered at another time.

THE EXAMINATION OF TEACHERS.

BY SUPT. W. P. BECKWITH, ADAMS, MASS.

A MASS of evidence might easily be adduced to justify the conclusion that there is a great lack of uniformity, even within the limits of a given state, and of the most favored states, in the qualifications required of candidates for the teacher's work, and in the methods of ascertaining the same; and that these causes also lead, in many cases, to a low standard of qualifications.

The question arises, as to what, if anything, can and should be done to remedy the evils of the present system. It would be a manifest advantage to the schools, if the qualifications for teaching a given grade could be more precisely stated, and more accurately "ascertained" than at present. Something may, perhaps, be learned from the principles of civil-service reform. The power of removal must be left, as now, unchecked in the hands of committees, for many reasons. But the examination of candidates, so far as determining whether or not they possess the minimum of qualifications, should be conducted by an authority entirely distinct from and independent of school committees. These examinations should be held at stated times and places, convenient to all, — the questions being the same throughout the state, and the marking of the papers should also be carefully supervised, at least, according to definite, common, and thoroughly understood principles. The questions might be prepared by the State Board of Education, through its secretary and agents, but it would be an excellent plan to allow the active, professional teachers of the state to have, in some way, an influential voice in the matter. A board could be organized for the purposes of this examination, to act in coöperation with the representatives of the State Board, consisting of delegates from the county or other local teachers' associations. The times and places of holding the stated examinations might be so arranged that the inconveniences would be slight to the members of the board; and the labor would be cheerfully undertaken for the sake of the good results which might fairly be expected from it.

What would such a preliminary examination accomplish? Its first result would be to remove from the ranks of teachers those who are grossly ignorant. It would raise the ideal of the young man or woman who looks forward to teaching. It would tend to deter those from entering upon the work who only expect or intend to teach one or two terms. It would admonish those who now expect positions as a matter of course, almost as a matter of right, after graduating from the local high schools, that constant vigilance and industry are the ever-needful conditions of success. After a few years under such a system, it would be reasonable to expect a distinct advance among the teachers of the state, as a body, at least in point of intelligence.

There are important elements of success in the teacher's work which such an examination could not test. One's power over others, in the teaching sense; his aptitude for reading the precise state of another's mind, and in supplying the right amount of stimulus or assistance at the right time, — these are too subtle for such a test to disclose, and can only be made manifest to the born reader of character, or in the actual work of the schoolroom. So beyond this preliminary test, the action of school committees should in no respect be fettered or limited. They ought to be left free to take their own course in requiring additional tests or examinations.

The people of Massachusetts still retain enough of the spirit of the Pilgrims to demand for each community the right to the substantial management of its own schools. But we are also citizens of the Commonwealth, as well as residents of her municipalities, and it is not unreasonable for the state, in whose name, and by whose authority this system of free schools was established and is maintained, both to prescribe and to ascertain the minimum of qualifications for the teachers in these schools.

'T is not in mortals to command success; we 'll do more, deserve it. ADDISON'S CATO.

THE HISTORY OF OUR COUNTRY: HOW TO TEACH IT.[1]

IX.

LOCAL HISTORY FOR PRIMARY CLASSES.—III.

BY NINA MOORE, AUTHOR OF "PILGRIMS AND PURITANS."

THE stories of Boston during the anti-slavery period were prefaced by a talk on our former treatment of Indian prisoners; and on the old custom long since outworn by civilized nations, of enslaving conquered enemies. The fact that Indian captives were sent to Spain or to the Bermudas and sold as slaves aroused much indignation. Then one of the children told us that the porter of the hotel in which she lived had once been a slave.

"Where?"

"At the South."

The map of the United States was unrolled, the states from Maine to Florida were pointed out. Another child said that her papa had fought in a war about slavery.

"When?"

"More than twenty-five years ago."

"Which states had slaves in them then?"

We found the slave-holding states. Did they know which states had slaves in them at the time of the Revolution?

"No."

All of the states that they had named,—all, at least, that were states at all, then.

"Even Massachusetts?"

"Even Massachusetts."

"How could people be so wicked?"

"They had not learned that slavery was wrong. Were they wicked, if they had not yet learned to think about the rights of others? Was Washington wicked?"

They came to the conclusion that though it was hardly possible to imagine any one's failing to think slave-holding wrong, they must not condemn; but they were so dismayed at the idea that

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[1] Copyright, 1888, by William A. Mowry.

slavery once existed in Boston that I hastened to propose to them my plan of telling them in my next stories, how the Boston men gradually came to see the right and wrong of the slavery question.

The first story was about their old friend, John Winthrop. In 1646 the General Court of Boston, of which Winthrop was a member, fined a Boston captain for kidnapping some negroes on the coast of Guinea, and ordered that the stolen men should be carried back to their homes. This, a protest against man-stealing, was the first step.

The children, while giving their quite dramatic recitals of the voyage of this Boston vessel, its meeting with a "Londoner," the attack on the seaside hamlet and the bearing away of the spoils, used the schoolroom globe in tracing the captain's course from Boston to the Canary Islands, thence to Guinea, and finally back to Boston. They still found it difficult to believe that a man who would keep slaves could be really good, and shook their heads rather disapprovingly over Cotton Mather, for saying that he considered the gift of a "very likely slave" to be "a singular blessing," and "a mighty smile of Heaven upon his family."

Great was their rejoicing over Samuel Adams's action under similar circumstances. Some one presented Mrs. Adams with a negro woman, named Surrey; and Adams, who advocated the prohibition of slavery in Massachusetts, stood by his convictions firmly. "Samuel Adams's wife went to her husband," so runs the story, "and told him that a friend had given her a slave, a woman who would help her in the hard work that she was obliged to do about the house." Here I stopped and asked the children what they supposed Samuel Adams said to that.

"He said he wouldn't have the slave."

"He said he was very glad to have her."

I went on. "Samuel Adams said, 'A slave cannot live in my house.'"

"What did he do about it?" I urged again. "His wife needed help very much. What would you have done about it? Come and whisper in my ear." The whispers were various.

"I would have said that she couldn't come." "I would have let her in." "I would have had her live in another house and do my work all the same." "I would have sent her away, and then I would have done my wife's work myself!" "I would have set her free."

I repeated aloud the answers that I could remember, without betraying the source of any of them.

"I would have set her free," cried all.

"What did Samuel Adams say?"

"Samuel Adams said: 'Surrey must be free from the moment that she crosses the threshold.'"

Then came the account of Garrison's work, when slavery, extinct at the North, had reached such gigantic proportions in the Southern States. We pictured William Lloyd Garrison as a boy, bending over his shoemaker's last; or awakening at night to find his devoted friend, Puss, with her furry, purring family upon his pillow; as a young man learning to print and to edit a newspaper; and finally, as the champion,— one against many, telling the world that slavery was wrong, and getting imprisonment and the mob's abuse for his pains. The maps of Boston which the children had filled out during their study of the Revolutionary period showed them the Old State House, where Garrison was temporarily sheltered from the Boston mob, and a visit to the building fastened the event in their memories. After this crisis of the mob, the anti-slavery sentiment gained strength in Boston.

Our next story was of the fugitives, William and Ellen Craft, who came here for refuge.

With Shadrach's rescue the children were again enchanted. Indeed, these tales of the awakening desire for freedom among a people so ignorant and repressed,—a people whose amiable content and power of devotion at once softened the conditions of their bondage and rendered those conditions the more difficult to break through, these instances of courage and determination struggling against such heavy odds, have an element of genuine romance which are keenly felt by children of the present day,—more keenly by them, perhaps, than by an older generation who have had a nearer, more prosaic view.

With the stories of Sims and Burns, we entered a more sombre vein. But the happy optimism with which children always press on to a good ending for the most dismal tale, and find it, too, made it impossible for me to leave Sims and Burns in the hands of their captors. We looked ahead and saw Sims making his way through the Union lines at the Seige of Vicksburg, and Burns freed at Baltimore by a ransom paid by northern friends.

The series closed with just a reference to the war, and to Lincoln's proclamation of emancipation, followed by a short account of Garrison's visit to Charleston at the end of the war, to be present at the ceremony of the flag-raising on Fort Sumter.

Mr. Garrison went at President Lincoln's invitation; Mr. Thompson was there also, and the whole sojourn in Charleston was a succession of congratulations and demonstrations of joy. Wherever Mr. Garrison went the colored people greeted him with shouts and songs.

On the day after the flag-raising, when he went to address the freedmen at their meeting at Citadel Square, they pressed about him with almost frantic delight, and he suddenly found himself lifted upon their shoulders and carried in triumph to the speaker's stand.

During the talks there was a noticeable absence of rancour or wholesale condemnation on the part of the children. That was as it should be. The lessons which history teaches are upon a plane where rancour should find no place.

METHODS OF TEACHING ARITHMETIC IN PRIMARY SCHOOLS.[1]

BY LARKIN DUNTON, LL. D.,
Head Master of the Boston Normal School.

XIX.

MULTIPLICATION.

BEFORE beginning the multiplication of numbers between 100 and 1000, the multiplication table should be thoroughly reviewed. Then should follow the multiplication of numbers between 10 and 100, which will be also partly a review. The three stages of the work will be the following: —

a. — Multiplication of Tens.

$9\times 20=9\times 2$ tens$=18$ tens$=180$.

$9\times 70=9\times 7$ tens$=63$ tens$=630$.

The pupils are supposed to be already familiar with the changing of tens to units. Then this work of changing units to tens and

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[1] Copyright, 1887, by Larkin Dunton.

of changing tens to units may be soon omitted, and the result reached at once; as, —

$$9\times20=180;\ 9\times70=630.$$

b. — *Multiplication of Tens and Units.*

$$\begin{array}{l} 6\times39= \\ 6\times30=180 \\ 6\times\ 9=\ \ 54 \\ \hline 6\times39=234 \end{array}$$

The above example illustrates both the order of procedure in purely mental reckoning, and also a good order of arrangement when the results of mental operations are to be recorded.

c. — *Multiplication of Hundreds, Tens, and Units.*

$$\begin{array}{l} 2\times478;\ 2\times400=800;\ 2\times70=140; \\ 800+140=940;\ 2\times8=16;\ 940+16=956. \end{array}$$

The order of multiplication is first the hundreds, then the tens, and lastly the units. In multiplying in the head, always begin with the highest order, and work towards the units. By this procedure we are compelled to repeat the partial results more than by the reverse process. Then, too, when results are to be united, they should be united as quickly as possible, so as to cause the least draught upon the memory. This applies especially to the multiplication of three-place numbers.

If the numbers from 1 to 10 are written on the board in an irregular order, — as 1, 2, 5, 8, 3, 7, 4, 9, 6, 10, — problems in multiplication can be easily set for a class, and so can examples requiring either addition or subtraction to be combined with multiplication. The following will serve as suggestions, both for the invention of the problems, and for the arrangement of the work by the pupils:

$$\begin{array}{rr} 1\times70=\ \ 70 & 1\times36=\ \ 36 \\ 2\times70=140 & 2\times36=\ \ 72 \\ 5\times70=350 & 5\times36=180 \\ 8\times70=560 & 8\times36=288 \\ 3\times70=210 & 3\times36=108 \\ 7\times70=490 & 7\times36=252 \\ 4\times70=280 & 4\times36=144 \\ 9\times70=630 & 9\times36=324 \\ 6\times70=420 & 6\times36=216 \\ 10\times70=700 & 10\times36=360 \end{array}$$

$1\times70+42=$	$1\times36+27=$
$1\times70-42=$	$1\times36-27=$
$2\times70+42=$	$2\times36+27=$
$2\times70-42=$	$2\times36-27=$
$5\times70+42=$	$5\times36+27=$
$5\times70-42=$	$5\times36-27=$
etc.	etc.

In performing the first of such exercises, when the results are to be written, the teacher should insist upon having the work so arranged as to show all the steps in the solution; as, —

$$\begin{array}{r}
5\times36+27 \\
5\times30=150 \\
5\times\ 6=\ 30 \\
\hline
5\times36=180 \\
\hline
180+27=207
\end{array}$$

Examples of the multiplication of hundreds, tens, and units will be but few, if the product does not exceed 1,000.

Chart XIII. will furnish an abundance of examples in multiplication. The teacher may require every number on the Chart to be multiplied by 1, 2, etc., to 10. Whatever tends to lessen the labor of the teacher without injuring the quality of his work, is not to be despised.

It is well, at this stage of the work, to extend the pupil's knowledge of the multiplication table to 11 and 12. For ordinary students it is hardly worth while to go beyond 12.

After the pupils have been well drilled in the multiplication of pure numbers, special attention should be given to the solution of practical problems. It will be necessary for the teacher to assist the pupils in the study of these problems. He will also have an excellent opportunity to impart much practical information in regard to those matters to which the problems refer, and to drill the pupils in the expression and application of the numerical ideas which they have already acquired, and of the practical truths which he imparts. In the solution of such problems the pupils necessarily receive continuous drill in sustained trains of reasoning. The following is an example: —

If beans are sold at 12 cents a quart, or 80 cents a peck, how much is saved by buying a peck all at once, rather than by the single quart?

If one quart costs 12 cents, a peck, or 8 quarts, would cost 8 ×12 cents, or 96 cents; and 96 cents are 16 cents more than 80 cents; therefore, 16 cents would be saved by buying a peck at a time.

The study of a problem of this kind gives the teacher an opportunity to impart to the pupils some elementary ideas upon wholesale and retail trade, as well as upon domestic economy; while the pupil is exercised in the expression of the relation of numbers, and also in going through a train of connected reasoning and its expression.

The development of the reasoning power in connection with the learning of arithmetic is too often undervalued. Arithmetic does not mean simply producing one number from another by adding and subtracting, multiplying and dividing; but, rather, judging, thinking, reasoning. Operations with numbers can be introduced only after conclusions are reached through the power of thought. A practical arithmetician is not a man who has attained great skill simply in uniting numbers to form new numbers, skill in numerical operations; but rather one who knows how, as well, to make the judgments necessary to be used in the solution of practical problems. If a person wishes to make others understand what he himself has clearly thought out, he must take pains to set it out in clear words and sentences. If instruction in arithmetic is to result in something more than mechanical skill in numerical operations, the pupil must be practised at every stage of the work, both in performing the steps of the reasoning processes required in the solution of problems and also in the brief, exact, and definite verbal expression of such reasoning. However valuable mechanical skill in performing operations upon numbers may be, it is of only secondary importance. Of much more importance is the ability to perform the reasoning processes which lead to the solution of practical problems. This reasoning discovers the numerical operations necessary for reaching the desired result; and without the reasoning the operations could not be performed.

A BISHOP said to a child of nine years, "My little friend, tell me where God dwells, and I will give you an orange." "Sir," answered the child, "if you will tell me where God does not dwell, I will give you two oranges."

COUNTRY SCHOOLS.[1]

BY SUPT. J. G. EDGERLY, FITCHBURG, MASS.

IV.

THERE is in many of these schools a lack of globes, maps, and charts that the teacher thinks are essential for the study of geography. This is to be regretted, but one must do the best he can without these aids. Children can be encouraged at certain seasons of the year to collect geological and other specimens that will interest them. One teacher requested his pupils to bring to school specimens of the various kinds of trees in the town. The result was surprising to every one. The people of the town had no idea of the great variety in their immediate vicinity. Such practice tends to cultivate the power of observation. It aids both teacher and pupil. There are those who have always lived in the country who cannot tell the names of a dozen different trees in their vicinity. The ability to do this may not aid the pupil in some branches of study, but by it habits of observation are developed. This is a consideration, the importance of which is likely to be ignored. The Prussians have a maxim: "Whatever you would have appear in the life of a nation you must first place in your schools." Let us see to it that in every practicable way the work of the school is allied to the interests of the inhabitants of the district. The names of a number of the common plants and shrubs are unknown to many residents of the rural districts. The teacher can do much towards awakening in the town an interest in botanical and geological pursuits, which will continue long after his labors in that locality have ceased. The plan of the town, of the village, of the district, should be made by the pupils, and their productions should be considered. Geography can thus be studied in a practical manner. The terms slope of the land, river basin, water shed, have a meaning in such schools, under the direction of a practical teacher. The newspapers from the various families in the district may be utilized; es-

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[1] Copyright, 1888, by Eastern Educational Bureau.

pecially in the study of history and geography. Map drawing should receive some attention. Let the outlines be drawn and a few prominent features placed thereon; some of the leading towns and cities may be represented. Finely finished maps are not always expected. A sufficient amount of time cannot be spared in which to prepare elaborate ones.

There are usually a few pupils at work in algebra, or some other high school study. The teacher is obliged to study hard to keep ahead of some of these. This is oftentimes a decided benefit. It is a sort of discipline that develops the teacher. The young man or the young woman who attempts to vary the exercises by asking the teacher how such a word in the reading lesson is parsed, or such an example in a certain arithmetic is performed, spurs that teacher to extra effort. The catechising or the examination of a teacher by some of these advanced pupils is a thing unknown to many whose entire experience in teaching has been confined to graded schools. The class reads: "It stood just above the bank"; "How do you dispose of *just?*" "Thy voice sounds like the prophet's word." A discussion arises regarding the word *like;* "Is it an adjective or an adverb?" "The book is worth a dollar"; "How shall we parse *worth* and *dollar?*"

These things have a familiar sound to all who have taught in these schools. Arithmetics were searched at home, examples selected therefrom and submitted to the teacher, with the request that he explain them. The teacher derived benefit from such experience. He studied algebra with the pupils, keeping a few pages ahead, that he might be able to help the class over some difficult portion of the book. The teacher studies with this in view. The most that can be done in some recitations is to study a lesson with the pupil. Difficulty is experienced in the attempt to solve a problem or comprehend a statement, and it arises because a certain principle is not understood clearly. "What part of the lesson has given you trouble?" is a question that may well be propounded to the class at first. There is something tangible then, upon which our efforts can be expended; some definite point toward which our energies may be directed. Encourage the young men and women to pursue a wide range of study.

The teacher must expect to help the pupils plan work for the long vacation. The terms are short, but much study can be done in these intervals. The teacher can be of great service in this direction.

The regular exercises occupy a great portion of the day, yet we should make an earnest effort to find time for general exercises. Different classes can write at the same time upon different topics. We must not expect elaborate essays; plain, direct style is needed. These exercises should not be prolonged. Aim at brevity. There should be a few declamations each week. The pupils may require aid in making selections. Do not encourage them to recite from Shakespeare or Milton when they should make their selections from the Third Reader. Should a boy feel too diffident to speak before the school, fearing that he may "break down," allow him the use of his book, that he may prompt himself. It is a trying ordeal for him, and we must, first of all, endeavor to put him at ease. Rhetorical flourish is an after consideration. The local history of any community should be studied. If a history of the town has been published, there should be a copy in the school and reference made to some of the persons and the events mentioned therein. If no such history has been published, the teacher should gather from some of the inhabitants the material for this purpose and use it in the school. Generally an interest can be aroused in the subject in this way. Such occasions as Washington's Birthday and Memorial Day should be observed. The impressions made at these times are lasting, and we cannot afford to allow such days to pass unnoticed.

Singing should form a part of the daily exercises. If the teacher cannot sing, there are in nearly every school some pupils who can lead. Encourage them to feel a pride in this exercise. The effect upon the school is gratifying. Said a distinguished educator, "There is nothing in the world like the singing of children, and nowhere do children sing as in the common school. We need more songs of home, of simple praise to God and man; more actual singing that shall knit together the souls of the scholars into a loving community."

A SCHOOLMASTER describing a money-lender says: "He serves you in the present tense, he lends you in the conditional mood, keeps you in the subjunctive, and ruins you in the future."

A YOUTHFUL applicant for graduation, on being asked the other day, "What does history teach?" answered, "That the United States never has been whipped, and never will be."

PRACTICAL METHODS OF TEACHING SPELLING.[1]

BY ANNA B. BADLAM,

Rice Training School, Boston, Mass.

VI.

GRADED LESSONS FOR ORAL AND WRITTEN SPELLING. (CONTINUED.)

General Direction.—1. Have each word pronounced, sounded, and spelled. 2. Have each word used in a sentence. 3. Have each word copied upon the slate. 4. Keep a list of the sentences which have been used orally and write them upon the board for a reading lesson later in the day; have these sentences copied upon the slate. 5. Use these same sentences for dictation exercises at the end of the week.

UNION OF FF.

Lesson 46. The initial letter changes. *U* short.

buff
cuff
muff
puff
ruff
stuff

Lesson 47. The middle letter changes to ĭ, ă.

stuff
stiff
staff

Lesson 48. The initial letter changes.

stiff
cliff
sniff
whiff
staff
quaff
chaff

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[1] Copyright, 1888, by Anna B. Badlam.

UNION OF SS.

Lesson 49. The initial letter changes. *O* short.

moss	toss
cross	loss

Lesson 50. The middle letter changes to *ĕ*, *ĭ*, *ă*.

moss	cross	loss
mass	——	lass
mess	cress	less
miss	——	——

Lesson 51. The initial letter changes to *ă*, *ĭ*, *ĕ*.

mass	miss	cress
pass	kiss	dress
grass	hiss	press

Lesson 52. The final letter changes.

mass	pass	cress	miss	moss
mast	past	crest	mist	most†

† Change of sound — O equals O long.

Lesson 53. The initial letter changes.

mast	mist	crest
last	list	rest
fast	fist	best

SIMPLE SUFFIXES. — THE ADDITION OF S TO AN ACTION WORD.

Lesson 54. Forms of Action Words.

hang hangs bring brings
ring rings sing sings

N. B. — The success of these lessons is largely dependent upon the ability of the pupils to use the words of each lesson in oral sentences. These sentences can be utilized later for supplementary reading matter upon the blackboard, and as exercises to be copied upon the slates.

EXAMPLES.

1.

I will hang my hat on the nail.
My hat hangs on the nail.
Hans hangs his hat on the nail.
The boys hang their hats on the nails.

2.

I will ring the bell for you to come in.
When the bell rings you must come in.
The teacher rings the bell when recess is over.
The bells ring for fire.

3.

Bring the book to me.
My dog brings me a stick.
What does the rain bring?
The rain brings the flowers.

4.

My bird can sing.
He sings well.

My bird sings to me.
I like to hear him sing.

THE SUFFIXES ER AND ERS.

Lesson 55. Action words changed to Name words.

ring	ringer	ringers
sing	singer	singers

THE SUFFIX ING.

Lesson 56. Action words and their forms.

hang	hanging	bring	bringing
ring	ringing	sing	singing

THE SUFFIX ES.

Lesson 57. Name words — their forms for one and more than one.

fish	fishes	mesh	meshes
dish	dishes	cress	cresses
wish	wishes	dress	dresses

It is well to keep a list of these words that are used as stems to form new words, and to have a little review of them from time to time.

METHODS OF REVIEWING.

Example 1. Let the teacher call upon a child to read any word, as *fish*, from the board. Let her call upon some child to tell her how she can change *fish* into *fishes*, or into *fishing*, or *fished*, or *fisher*, or *fishers*.

Example 2. Let the teacher call upon some child to write any word, as *fish*, upon the board. Let her call upon some child to change the word to *fishes*. Let the word *fish* be written again; let her then call upon some child to change the word to *fishing*, or *fished*, or *fisher*, or *fishers*.

Example 3. Let any word, as *fish*, be written upon the board; let the children copy it, and form all the words they can upon it.

Let the child, who has the best list, be allowed to write it upon the board at the close of the lesson.

Lesson 58. Action words and their forms — *a*, *e*, *i*, and *u* short.

fish	fishes	dash	dashes
wish	wishes	rush	rushes
lash	lashes	brush	brushes
splash	splashes	crush	crushes

press	presses
dress	dresses
bless	blesses

fishing	dashing	pressing
wishing	rushing	dressing
lashing	brushing	blessing
splashing	crushing	

THE SUFFIX ED (ed=t).

Lesson 59. Action words — the forms for present and past action. *a*, *i*, and *u* short.

fish	fished
wish	wished
lash	lashed
rush	rushed
crush	crushed

METHODS IN GEOGRAPHY.[1]

BY LARKIN DUNTON, LL. D., AND MISS L. T. MOSES.

XIII.

NATURE LESSONS — SECOND YEAR.

"WHAT shall our study of nature be about today?" said a brisk, cheery little woman, one blustering day in November, to the children in her class.

"Oh! the wind, by all means!" said the children.

"Very well, I too was thinking of the wind," replied the teacher. "Who can tell me why today is a very good day for studying the wind?"

All hands are raised; and, in answer to the question, the first child says: "Because it blows so hard." Other children say: "Because the wind is high"; "Because it blows a gale"; "Because you can hear it." These and other expressions in regard to the matter are given.

The teacher has before provided herself with dry leaves, bits of wool, and feathers; and, recess time having now arrived, she tells the children to choose six of the fastest runners in the school, as she wants them to run a race with the wind at recess.

"O, Miss Elty," exclaim the children, "you are joking with us, the wind does not run!"

"You shall see. But will some one name a boy or girl who can run very fast?"

The children are chosen, five boys and one girl. The bell strikes for recess, and all go out. The teacher places the six chosen ones in a row, back to the wind, and tells them to catch the feathers which she will throw when she has counted three. All the other children are eagerly watching.

The teacher counts, "One, two, three," and throws the feathers high in the air. The selected children all start, and run to the limit which the teacher had previously set for them; but the feathers have gone far out of sight long before they get there.

When the children come back, six more are chosen, and they try a race with the leaves which the children think rather heavier than the feathers; but the result is as before; the leaves are out of sight long before the children reach the goal. A horse is passing while the race is going on, and the teacher throws the wool into the air, and the children see that the wool moves faster than the horse.

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[1] Copyright, 1887, by Larkin Dunton, and Miss L. T. Moses.

When the children have again assembled the teacher asks them what they know about the rate of the wind, or the fastness with which it carries things along. The children are all very sure it moves faster than a boy or girl can run. The teacher tells them that they could probably run five miles an hour, if they could run as long, and asks what they know now of the rate of the wind. All the pupils are sure it carries things more than five miles an hour.

The children now think of the rate a fast horse can go; and, if they do not know, they are told that the fastest horse in the world will go a mile in a little over two minutes. And they are asked to think of the rate of the feathers, the leaves, and the wool as compared with the fastest horse they have ever seen. It is decided that the things went faster than any horse they have ever seen go. The teacher tells them she thinks they are right; that she feels sure the wind is going at least a mile in a minute and a half today; but that she has known it go a mile in less than a minute, in fact, faster than a fast train.

They all conclude to watch for winds that move so fast. The teacher tells them that she doubts whether they could come to school when the wind was blowing over a mile a minute, or even as much as that; because when the wind is so high it usually storms, and it would not be safe for such little folk to be out.

The teacher now says, "I want every child here to think which way the feathers and leaves went." After waiting a moment, she continues: "Show me the way with your hands." The children do this, and then the teacher says: "Think again, and tell me the direction from which the wind came. Point with your hands in the direction from which it came." This is done, and the children name the cardinal or semi-cardinal point of the compass indicated, and the teacher names the wind from that point.

The pupils are now told to listen to the wind and hear what it says, or what kind of a noise it makes. One thinks it roars like a lion; but when asked, where he has heard a lion roar, he amends his statement, and says it roars like the waves on the beach.

Another who has heard the lion roar at the circus, thinks the first one was right; that the wind does roar like a lion. This suggests to a pupil that the wind is howling. One little girl thinks it like the thunder; another says it sounds like an organ. Pretty soon it seems to the children to scream, to shriek, and to wail.

The teacher has heard far different noises made by the wind; but she thinks her children have listened well today, so well that she wants them to listen a moment longer; so that when the wind makes other noises they can remember this. Then, too, she will want to know, some very windy day in the winter, perhaps, when the wind is faster than today, whether it is louder, too. To be able to tell her this, they will have to remember how fast the feathers and leaves went today, and how loudly the wind howled, so they may shut their eyes and try to see the feathers and leaves going as they did in the wind.

The children are now sent to the window to see how the clouds move; and they find them moving in the same direction as the wind moved the feather. They conclude the wind moves the clouds, too. They now compare the rate at which the clouds move with the rate of motion of the other things, and some think the clouds move more slowly than the other things, — some think they move just the same. As they differ, they are told to watch the clouds when they go home.

The teacher tells the pupils that because the wind is coming from the northeast and the clouds are coming in thicker and thicker from the sea, she expects the weather will change before tomorrow, and perhaps before tonight even. She wants the children to watch very carefully, so that before many weeks they can tell just what sort of weather every wind brings. The children think they know already; for they have noticed that when their vanes point east both morning and afternoon, it is very likely to rain the next day; and that it is about the same when the wind is southeast, and even more probable when it is northeast.

"Since you have watched the east winds so well, you may tell me what the west winds bring."

"We know that, too; for the west wind almost always brings pleasant weather. We know, too, that the north wind is cold and the south wind warmer," answer the children.

"You have done well with your weather vane, children. I would now like to have you study the northwest and the southwest winds, and also the northeast and southeast. I want to know these things: First, which storm is longest, a northeast, east, or southeast one? Next, tell me this: Which wind keeps the fair weather longest, the northwest, west, or southwest wind? There is one thing more that I want you to watch for this year, and that is to find whether there is ever a time when there is no wind at all. I know there are days when the air seems perfectly still; but even on those days, I wonder whether the lightest down from a feather or from the seed of a flower would not be carried along in the air. I should like to have you try to find out for me. Now is there anything you wish to watch for?"

The children say that they wish to find a wind that goes as fast as a train, and even faster; that they wish to find what other noises high winds make, and what noises the gentler winds make.

The teacher then asks what things the high winds do; she asks the children to tell her what they saw the wind do, as they came to school, what they have seen it do on rainy days to people's umbrellas, and what it does to vessels on the water.

Then the children know one use of the wind. And this year its use in purifying the air may be suggested, and thought about by the children. If there are windmills in the vicinity, the children may think of their use; and they will readily think of the pleasures of kite-flying.

This will finish the lessons on the wind; but the lessons will be of little use unless followed by frequent observations and frequent conversation on the observations.

There are several children's poems which may be profitably read, among them E. C. Steadman's "What the Winds Bring," and George Cooper's "The Wind and the Leaves," which is here given: —

THE WIND AND THE LEAVES.

"Come, little Leaves," said the Wind one day,
"Come o'er the meadows with me and play;
Put on your dress of red and gold:
Summer is gone and the days grow cold."

Soon as the Leaves heard the Wind's loud call,
Down they came fluttering, one and all;
Over the brown fields they danced and flew,
Singing the soft little songs they knew.

"Cricket, good-by, we 've been friends so long!
Little Brook, sing us your farewell song;
Say you are sorry to see us go:
Ah! you will miss us, right well we know.

"Dear little lambs in your fleecy fold,
Mother will keep you from harm and cold,
Fondly we've watched you in vale and glade:
Say will you dream of our loving shade?"

Dancing and whirling the little leaves went;
Winter had called them and they were content;
Soon fast asleep in their earthy beds
The snow laid a coverlet over their heads.

LESSONS IN ENGLISH.

I.

FIRST GRADE, GRAMMAR SCHOOL.

BY WILLIAM A. MOWRY.

IT was the principal's class in the first room of a well-graded grammar school. They had, unlike many such classes where the modern methods of "Lessons in English" have prevailed, studied *English Grammar*. The pupils could appreciate, — thanks to their study of these principles of grammar,— many of the general facts and applications of rhetoric. The following extract was placed upon the blackboard, with directions for every member of the class to make a neat and careful copy of it with the typewriter. This instrument had been in the school about six months, and was found to be a useful aid in the study of English composition. Special attention was called to the thought, the facts, the style, the rhythm, the punctuation, etc. The next day the lesson was given somewhat after the following manner: —

"We have a very interesting text for our lesson today. John, please read the selection." (John reads as follows):

"As when to them who sail
Beyond the Cape of Hope, and now are past
Mozambique; off at sea, northeast winds blow
Sabean odors from the spicy shore
Of Araby the blest; with such delay
Well pleased, they slack their course, and many a league,
Cheered with the grateful smell, old ocean smiles."

Paradise Lost. Book 4, lines 159-165.

The teacher reads a short extract from what precedes, showing that the great poet had made mention of the mental effect of the exercise of the sense of smell.

"And of pure now purer air
Meets his approach; and to the heart inspires

Vernal delight and joy, able to drive
All sadness but despair: now gentle gales,
Fanning their odoriferous wings, dispense
Native perfumes, and whisper whence they stole
Those balmy spoils."

Then follows the extract.

"Sail? Sail where?"

"Beyond the Cape of Good Hope. That means, around the southern point of Africa."

"Where is this vessel from?"

"Probably from England, as Milton was an Englishman, writing for Englishmen."

"To what part of the world is the vessel going?"

"We cannot tell. There is nothing to indicate it."

"Think again. Where would an English vessel probably be going, after passing the Cape of Good Hope?"

"Perhaps to India?"

"Why probably there?"

"Because the English have great possessions there."

"Very well; let us suppose the vessel is going to Bombay, or Madras. How far has it now gone?"

"Just through the Mozambique Channel, and beyond the island of Madagascar."

"What do the sailors there experience?"

"Sabean odors from the shores of Arabia, brought by the northeast winds."

"Why called 'Sabean odors'?"

"Because they came from 'Saba,' which was a province in the southwest corner of Arabia, now called 'Yemen.'"

"Now look on the map of Africa and Asia, and observe if Milton was correct in saying that the winds from Saba were northeast winds."

"I think he is in error, for Saba is north and northwest from the northern end of the island of Madagascar."

All the members of the class agree that the northeast winds blowing upon a vessel thus located would not come from Saba, or even from Arabia.

"Have any of you studied the probable course of a vessel from the channel of Mozambique to India?"

One boy said that he had an uncle who had been to Hindostan in a sailing vessel, and "he said that the vessel hugged the African shore past Zanzibar, then followed a northerly direction nearly to Arabia, and after that turned east."

"What was the reason for this?"

"To avoid the destructive wind-storms that so frequently blow across the Indian Ocean."

"So, you observe that Milton after all was right, if you give him the credit that belongs to him of knowing the course ordinarily taken by vessels under such circumstances, for Saba was considerably east of north from a vessel hugging the shore in the vicinity of Zanzibar."

"Well, I think Milton was a very learned man, or else he was very careful how he wrote."

"What are the next words?"

"With such delay well pleased, they slack their course."

"What delay? No delay has been spoken of."

"That is implied. The delay is from head-winds. The north-east winds are blowing directly against their track."

"Why 'well pleased'? Sailors are not generally pleased to have head winds."

"Is it not because of the pleasing, mental effects of those odors from Arabia?"

"Certainly. This, you will observe, gives the whole reason for introducing this figure. The effect of the pleasant odors is such as to make the sailors glad to 'slack their course.'"

"Now, please notice the very slow measure of these lines,

'With súch | deláy | well pleásed, | they sláck | their coúrse | and má | ny a leagúe.'

"You cannot read it rapidly if you try. But the very next line reads after an easy, cheerful, tripping fashion: 'Cheered with the grateful smell, old ocean smiles.'"

"I had no idea so much of interest could be found in this innocent little extract."

"There are many other things which we might consider, as (1) the relative, intellectual character of the senses of seeing, hearing, feeling, tasting, and smelling; (2) why called 'Araby the *blest*,' (3) the poetic figures, as for instance, 'old ocean smiles,' (4) or the special use of 'As' at the beginning of the selection, and many other things, but we must close our lesson as the hour has expired."

EDITORIAL.

DO not be sarcastic. The common school teacher has to deal with tender minds which are often of fine mold, delicate, and sensitive. Sarcasm is bitter, it is blunt, it is coarse, it belongs to a barbarous age; let it have no entrance into the schoolhouse. Shut and bolt and bar the door against it and keep a guard posted with fixed bayonet, who shall not suffer it to break in unawares.

DO not ridicule, or tantalize, or "make fun" of pupils. The delicate, sensitive, shrinking nature of the little child should be invariably respected. Many a child has been discouraged, disheartened, and has settled down into permanent mediocrity by being laughed at for some simple blunder or not uncommon bit of ignorance where not the slighest blame attached.

LET no teacher act the part of a spy. The secret service may be necessary in wars and times of rebellion and treachery, but all that belongs to a state of barbarism from which we long ago should have emerged, and in which the schoolhouse has no place. It is impossible for the teacher who resorts to a system of espionage to retain either the love or respect of his pupils. Moreover its practice on his part will generate roguery and trickery on their part. Dr. Muhlenberg, of New York, used to say that he would never wear slippers about the house. He wanted every pupil to know from the sound of his footsteps when he was approaching the pupil's room.

NEITHER should a teacher resort to such measures as in any case would be likely to tempt the child to falsehood. The self-reporting system can be honestly carried out only in heaven, where it is not needed.

IT goes without saying, yet it needs be said, that the teacher should never threaten. Instead of saying, "James, if you whisper again I will flog you within an inch of your life," pass the whispering by in silence, and the next day when James asks a favor, kindly say to him, "You disobeyed me yesterday, therefore I must refuse the privilege you ask. When you learn self-control, and show an obedient spirit, it will give me great pleasure to grant you any favor in my power."

A VERY important lesson, which many teachers find it difficult to learn, is to say "I do not know." Many young teachers, especially, are in constant dread of betraying their ignorance, while the experienced teacher finds it no hardship to confess ignorance of many things. He, who has the courage on any proper and necessary occasion to confess his ignorance, will, to the fullest extent, secure and retain the respect of his pupils. But if the question be within your power to investigate, and it is possible to find an answer, rest not day or night till you have given your pupils the desired information.

AN agreeable, genial, loving disposition is an essential to a teacher's success. Like begets like. The pleasant disposition on the part of the teacher inoculates the whole school with the same spirit. Some teachers resemble too closely a thunderstorm with dark clouds, the rolling thunder, the flashing lightning, which must strike somewhere. It were far better for them to manifest merry sunshine, the genial, balmy air of spring, the atmosphere of love and good will. Reserve and repression are not for the schoolroom. A hearty, frank, honest bearing at all times, under all circumstances, will generate the same spirit in most pupils.

SYMPATHY is an essential characteristic of the successful teacher. Children are quick and accurate judges of character. If a teacher at heart is selfish and distant and cold, the pupils will be sure to know it, but one who is full of true sympathy, who can soothe them in their little trials, aid them in their perplexities, gently and lovingly smooth away their troubles, will be sure to receive the hearty respect and sincere love of even the worst pupils in school. In no other way can the teacher secure and maintain the confidence and affection of the pupils.

PATIENCE, also, is one of the cardinal virtues of a teacher. An impatient, petulant spirit which chides the little one for not having learned the lesson thoroughly, and which scolds the child for the slightest dereliction, is sure to bring failure and disappointment in the schoolroom. It is essential that every teacher should constantly bear in mind that the children are young, inexperienced, immature, that they have not yet acquired the power of application and concentration of mind, that the ability to learn lessons is a matter of growth, and that until this power has been secured by long practice which necessarily precedes the establishment of habit, patience and encouragement, with just enough assistance, are the duties of the teacher.

SOME teachers "talk too much with their mouths." It is a positive sin, besides, like all sins, being foolish, for the teacher to be garrulous. Every teacher should avoid being a tunnel. The schoolroom should have outgrown the pouring-in process. A quiet, easy, self-poised manner, which constantly intimates and unconsciously suggests reserve power is a characteristic of the most useful and successful teacher.

ABOVE all the teacher should cultivate "large, round-about common sense." Too many fail for want of good judgment and tact. Above most people the teacher needs what Mrs. Stowe denominates "faculty"; that is, the power to adapt oneself to circumstances and to do just the right thing, in the right way, at the right time. The knife should be grasped by the handle, but if foolish persons persist in grasping it by the blade they must expect to get cut. The sharper the knife the greater the danger.

The foregoing suggestions, like all directions and generalizations, should be used *cum grano salis.* General directions are not to be followed blindly, but to be applied with the same "large, round-about common sense."

EXTRACTS FROM THE "LONG AGO."

I.

DATE, 1880 — concerning 1840. State, Massachusetts. "Well, well! So you have come East once more?"

"Yes; I wanted to see the old homestead again before I die."

"Well, it was a long journey for a man of your age. You are certainly over fourscore."

"So I am. I was eighty more than three years ago."

"I believe I have not seen you in over forty years. You used to 'keep school.'"

"Yes, I taught many years before I went West. You were one of my pupils?"

"Oh, yes. I remember it well."

"See here. Read that, will you?" and the old man took out of his pocket a newspaper and pointed to an article of "School Reminiscences."

The younger man read as follows: — "This man will be remembered by all who were his pupils. He was cross, harsh, and tyrannical. Small children, who ordinarily loved to go to school, would leave their homes every morning, crying and pleading with their mothers to let them stay at home. One of his favorite modes of punishment for the smaller scholars was to pull their ears and lift them from the floor by their ears, and they have been known to go home with ears bleeding, partially torn from their heads. Small children would shudder if he looked at them, and tremble if he spoke to them. They were taught to regard whispering by young children in school hours as an offence as serious as highway robbery or murder would be for older persons. One thing was sure, he 'kept order,' and if the children learned anything it was surely beaten into their brains, often, very often, with the ruler. One day, a small boy, about five years of age, sitting on the 'low seat,' was busying himself with a nail, digging out the dirt from a crack in the seat. The teacher spied him, stepped stealthily like a cat across the room, his thin slippers without heels making no noise upon the floor, grabbed the little innocent fellow by the back of his jacket with one hand, threw him over the stovepipe which ran horizontally along overhead, and caught him with the other hand as he came down. Then throwing him back upon his seat, this tyrant yelled out, 'There; stop your playing now, will you?' At another time he found the same boy engaged in some similar, quiet, noiseless 'play,' and grabbing him with one hand, threw him across the floor against the seat opposite, at the risk of breaking his bones. I have seen many teachers who were noted for their severity, but I think I never saw one or heard of one more unreasonably severe, or more dreaded and feared by his pupils than he was."

"There, what do you think of that? Is n't that a pretty hard picture of the old schoolmaster?"

"Indeed, it is; and that means you, does it?"

"Certainly. Is n't it too bad for him to write like that of me?"

"Well, you must n't ask me."

"Why not? You went to school to me."

"Yes, I did."

"Well, it is n't true, is it?"

"I told you not to ask me."

"I know, but I wanted you to say that it is n't true. I never did that, did I?"

"Yes, you did, and I was the boy you threw over the stove-pipe."

By way of contrast to this old-time picture, go with me to one of those happy, interesting little primary schools in your town, or any other town, or in the country district, where the brightest of children are being taught by that well-trained, kind, thoughtful young lady who graduated two years ago from the State Normal School. Observe the cleanly and cheerful appearance of the room, with its pictures upon the walls, its mottoes, its button-molds, its splints, its great numeral frame, its arithmetic chart, its Stanford wall maps, and other illustrative apparatus. How happy the children's bright faces look, and how skilfully the teacher leads them over the green pastures and beside the still waters.

This schoolroom is to them all the happiest place in the world except "home," and, indeed, for some of the children no exception need be made. The world is moving onward, and the schoolhouse is in the van of the procession. YE ANCIENT PEDAGOGUE.

HAPPY HOURS.

THANKSGIVING.

Come home! come home!
The hearth-fires burning bright
Call with clear tongues of light,
"Exiles, where 'er ye roam,
Hark! the sweet welcome home;"
The door stands wide,
Fond hearts and true wait at the ingle-side:
Come home!

Come home! come home!
Haste from the city's care,
Home can no longer spare
Her own beloved ones now;
Smooth the close-knitted brow,
Rest, weary head,
Upon thy childhood's soft and peaceful bed:
Come home!

Come home! come home!
The fervent hand-clasps feel
Grappling like links of steel;
Brothers and sisters all
Come to your father's hall,
To mother's arms, —
O dear embrace beyond all later charms!
Come home!

Come home! come home!
Surround the festive board,
Let the health-cup be poured,
And as ye quaff it, sing
To God your thanksgiving!
Our fathers' God,
Who leads us safely home with staff and rod:
Come home!

— *Selected.*

THE CAT'S THANKSGIVING DAY.

"Give me turkey for my dinner,"
  Said a tabby cat.
"Before you get it you'll be thinner:
  Go and catch a rat,"
Said the cook, her mince-pies making,
  Looking fierce and red,
And a heavy roller shaking
  Over pussy's head.

Hark! her kittens' shriller mewing,
  "Give us pie," said they,
To the cook, amid her stewing,
  On Thankgiving-day.
"Pie, indeed! You idle creatures!
  Who'd have thought of that?
Wash your paws and faces neater,
  And go hunt! Scat! scat!"

So they went and did their duty,
  Diligent and still;
Exercise improved their beauty,
  As it always will.
Useful work and early rising
  Brought a merry mood;
And they found the cook's advising,
  Though severe, was good.

—*Selected.*

GOLDEN KEYS.

A bunch of golden keys is mine
To make each day with gladness shine.

"Good morning!" that's the golden key
That unlocks each day for me.

When evening comes, "Good-night!" I say,
And close the door of each glad day.

When at the table, "If you please"
I take from off my bunch of keys.

When friends give anything to me,
I'll use the little "Thank you!" key.

"Excuse me," "Beg your pardon," too,
When by mistake some harm I do.

Or if unkindly harm I've given,
With "Forgive me?" I shall be forgiven.

On a golden ring these keys I 'll bind,
This is its motto, " Be ye kind."

I 'll often use each golden key,
And then a child polite I 'll be. —*Selected.*

A BIT OF PARSING.

RECITATION.

ALTHOUGH in the first person, singular number, the baby is equal to any number of persons plural. He is in the nominative case until you find a name for him; he is in the possessive case when he gets hold of the sugar bowl; he is in the objective case when you want to give him a bath or put him to bed. His tenses vary, but the imperfect predominates. He is in the active voice at all times of day and night. He is in the indicative mood when he wants anything, in the potential when he gets it, in the imperative always, and in the subjunctive never. He is a common noun, but a highly irregular verb. He is the subject of the sentence invariably, and governs absolutely, without being limited by anybody or anything. He does not confine himself to nine parts of speech, but has a fragmentary discourse of his own impossible to number or catalogue. He follows, implicitly, only one rule, which is: To be an exception whenever he chooses, and that is pretty often. If you want to know how often, stay at home and study his requirements some day, while his mother is out shopping. —*Exchange.*

MEMORY GEMS.

TWO ears and only one mouth have you;
The reason, I think, is clear;
It teaches, my child, that it will not do
To talk about all you hear.

Politeness is *to do* and *say*
The kindest thing in the kindest way.

To have his tongue cut out, and to be seated, deaf and dumb, in a corner, were preferable to his condition who cannot govern his tongue. — *Sadi.*

FOR the structure that we raise,
Time is with materials filled;
Our todays and yesterdays
Are the blocks with which we build. —*Longfellow.*

PEOPLE don't grow famous in a hurry, and it takes a deal of hard work even to earn your bread and butter. — *L. M. Alcott.*

IF it is not right, do not do it; if it is not true, do not say it. — *Marcus Aurelius.*

THE old fashion of simplicity is the best for all of us. — *L. M. Alcott.*

Be good, sweet maid, and let who will be clever;
Do noble things, not dream them, all day long:
And so make life, death, and that vast forever
One grand, sweet song. — *Charles Kingsley.*

Little moments make an hour;
Little thoughts, a book;
Little seeds, a tree, or flower;
Water-drops a brook;
Little deeds of faith and love,
Make a home for you above.

Self-reverence, self-knowledge, self-control;
These three alone lead life to sovereign power. — *Tennyson.*

What we do not understand we do not possess. — *Goethe.*

There is no beautifier of complexion, or form, or behavior, like the wish to scatter joy and not pain around us.

Swift kindnesses are best; a long delay
In kindness takes the kindness all away.

THE STUDY OF SYNONYMS.

Marsh, Swamp, and Bog.

1. All three are derived from the Anglo-Saxon.
2. All three refer to low, wet land.
3. A Marsh is a considerable tract of low, wet land, generally covered with water. Sometimes Marshes are so extensive as to form geographical features of the country.

   A Swamp is a piece of flat, spongy land not covered with water, and of no considerable extent.

   A Bog is a soft, treacherous Swamp, covered with vegetation, yet not compact enough to bear more than a slight weight upon its surface.
4. The road wound through lines of willows growing in the Swampy land, then on through long tracts of Marsh until we were but half a mile from the foot of the hill, when we were obliged to drive two miles to pass around a Bog that could not be filled up to make a safe road.

Storm and Tempest.

1. Storm is derived from the Anglo-Saxon.

   Tempest is derived from the Latin.
2. Both refer to a violent disturbance of the atmosphere.
3. A Storm is, properly speaking, a violent wind, and may or may not be accompanied by snow, hail, or rain. To speak of a mere fall of rain without wind as a Storm is not proper.

   A Tempest is a sudden, violent Storm, usually accompanied by torrents of rain, thunder and lightning. Tempests are most frequent on the coast of Italy, where the name originated.
4. "A daring pilot in extremity;

   Pleas'd with the danger when the waves went high,

He sought the **STORMS**; but, for a calm unfit,
Would steer too nigh the sands to boast his wit."

"These **TEMPESTS**, so dreadful in themselves, though unattended by any other unfavorable circumstance, were yet rendered more mischievous to us by their inequality, and the deceitful intervals which they sometimes afforded."

SHIP AND VESSEL.

1. **SHIP** is derived from the Anglo-Saxon.
   VESSEL is derived from the Latin.
2. Both are water crafts.
3. A **SHIP** is, strictly speaking, one kind of Vessel. A **VESSEL** may be any structure made to float on the water. A **SHIP** is a three-masted **VESSEL** with all three masts square-rigged. It is furnished with a bowsprit, and each mast is composed of a lower mast, a topmast, and a topgallant mast.
   The term **SHIP** is not infrequently misused for **VESSEL**, meaning any kind of sailing craft.
4. "Like **SHIPS** that sailed for sunny isles,
   But never came to shore."
   "Began to build a **VESSEL** of huge bulk."

FRETFUL, PEEVISH, AND CROSS.

1. **FRETFUL** is derived from the Anglo-Saxon.
   PEEVISH is probably derived from the Old English or Scotch.
   CROSS is derived from the Latin.
2. Ill-humored.
3. **FRETFUL** refers to the outward act, and is shown by complaining impatience.
   PEEVISH refers to the state of the mind, and marks the inward spirit.
   CROSSNESS is **PEEVISHNESS** with anger or vexation.
4. A sick child is likely to be **FRETFUL**.
   A child that is always thwarted is apt to become **PEEVISH** or **CROSS**.

EXAMINATION QUESTIONS.

ARITHMETIC. CLASS IV.

1. Bought $35\frac{1}{4}$ acres of land for \$$172\frac{3}{4}$. At the same rate how much must be paid for 240 acres?

2. From twenty-five ten-thousandths take sixteen ten-millionths.

3. What will $16\frac{2}{3}$ barrels of apples cost at \$$3\frac{1}{3}$ per barrel?

4. Write in words: .0786432; 907.04388; 5.107067.

5. From the sum of $\frac{4}{5}$ and $\frac{4}{7}$ take their difference.

6. From a piece of velvet containing $45\frac{3}{7}$ yards, I sold $5\frac{4}{5}$ yards, $9\frac{2}{3}$ yards, $16\frac{3}{4}$ yards, and $5\frac{1}{6}$ yards. How many yards remained?

7. Change to decimals and add, $30\frac{3}{4}$, $\frac{3}{40}$, $13\frac{2}{5}$, $\frac{8}{125}$.

8. How many square feet in the floor of a room $15\frac{1}{7}$ feet long and $15\frac{3}{4}$ feet wide?

9. A man paid .23 of his money for land, .39 of it for a house, and had \$7,600 left. How much had he at first?

10. What is meant by the factor of a number? What factors are common to 108 and 144?

11. Bought 360 oranges at the rate of $1.30 a hundred, and sold at the rate of 15 for 25 cents. How much did I gain?

12. My garden is 4¾ rods by 3¼ rods. What will be the cost of fencing it at $1.44 a rod?

13. Bought 85,237 feet of lumber at $12 a thousand feet, and retailed it at $1.70 a hundred feet. Gain?

14. Change ⅜, 9/12, and 14/25 to decimals and find their sum.

15. What is the cost of 3,600 bricks, at $7 per thousand?

16. For $23.04 I can buy 8 pieces of muslin, worth 9 cents a yard. How many yards are there in each piece?

17. If I sell 23 barrels of flour for $149.50, I lose 5 cents on the cost of each barrel. What did it cost me per barrel?

18. With 4/7 of his money, John can buy 13 more oranges at 2 cents apiece than he can buy with ⅗ of his money. How much money has he?

19. If a car-wheel is 8 7/12 feet in circumference, how many times will it turn in running 12⅞ miles, 1 mile being equal to 5,280 feet?

20. J. N. Steele, of Boston, sold G. R. Williams 67 bushels of oats, at 43 cents a bushel; 11 bales of hay, at $1.13 a bale; 37 bushels of mixed feed, at 54 cents a bushel. He received $12.17 in cash, and the remainder in butter at 45 cents a pound. How many pounds did he receive?

ARITHMETIC. CLASS V.

1. If 75 feet of garden hose cost $11.25, what will 125 feet cost?

2. Change these fractions to equivalent fractions having the least common denominator: ¾, ⅚, ⅜.

3. Paid $6.40 for 2 bushels of chestnuts, and sold them for 15 cents a quart. What was the gain on the whole?

4. L. C. M. of 12, 36 and 48 divided by their G. C. D. = ?

5. Cost of ½ of ⅔ of 120 dozen lemons at 20 cents per dozen?

6. Tell what each term of a fraction denotes.

7. The sum of two numbers is 640,503 and one of the numbers is 156,245. What is the other number?

8. Find the sum of $4½, 6 dimes, 25 cents, 37½ cents, $4.005, and 3 mills.

9. A man earns $1.50 in a half day and pays $6 a week for board. How much can he save in 12 weeks?

10. L. S. Brown of Salem, bought of M. F. Cheeney of Boston, the following articles: 12 yards of cotton cloth at 12 cents a yard, 14 yards of calico at 5 cents a yard, and 15 yards of silk at $1½ a yard. Make out the bill and receipt it.

11. Cost of fencing a field 24 rods by 16 rods at $1.25 per rod?

12. A farmer sold 12 acres of land at $15 an acre. With the money he paid for 3 cords of wood at $5½ a cord, and 5 barrels of flour at $6¾ a barrel. How much money had he left?

13. 131,320 ÷ XCVIII = ?

14. At the rate of 3 quarts for 20 cents, what cost 5 pecks, 2 quarts of cranberries?

15. When peaches are sold at $6 for 8 baskets, how many baskets must a man sell to receive $582?

16. Find the sums of the prime numbers from 1 to 31 inclusive.

17. I paid $8,960 for 8 city lots, and sold them at a loss of $12 on each lot. How much did I receive for three of them?

18. If the product is 297,150, and the multiplier 175, what is the multiplicand?

19. Bought 6½ gallons of milk at 20 cents a gallon, and sold it at 3½ cents a pint. Gain?

20. (*a*) A man walks 4 miles in an hour; how far will he walk in 4 hours?

(*b*) If a boy walk half as fast as the man, in how long a time will he walk the same distance?

(*c*) How far do both together walk?

(*d*) If they were both going from their homes, how far from home will each be at the end of two hours?

(*e*) From the end of the journey, how long will it take the boy to walk home?

(*f*) How far must the man walk from the same point to reach home?

ARITHMETIC. CLASS VI.

1. What is United States Money?

2. A drover bought 240 sheep at $4.50 a head, drove them to market at an expense of $75, and then sold them at $6.50 apiece. What did he gain?

3. Write in words 9,000,086; 482,003.

4. Find the cost of 840 tubs of butter, each tub weighing 15 pounds, at 32 cents a pound?

5. 2⅓ dozen eggs cost 84 cents. How much is that apiece?

6. What is the value of 144 lemons at the rate of 3 for a half dime?

7. A man earned $60 a month; his expenses are $525 a year. What can he save in 5 years?

8. From $40 take four mills. Express 13,589 mills in dollars, cents, and mills.

9. If a locomotive goes at the rate of a mile every three minutes, in how many hours would it travel a distance of 90 miles?

10. I bought 140 chickens at 75 cents a pair; for how much must I sell each chicken to gain $18 on the cost?

11. How many whole ones make a unit? How many half dollars in $2.50?

12. A man had a cask containing 36 gallons of vinegar. If he sold ⅔ of it, how many quarts would remain in the cask?

13. What is a concrete number? Give an example.

14. If John has $7.20 and James has three times as much as John, how many pocket knives can they buy at 80 cents apiece?

15. I had 120 sheep; but $\frac{1}{10}$ of them died, and I sold the remainder at $7.50 each. How much did I receive for them?

16. There are 60 seconds in a minute, and 60 minutes in an hour. How many seconds from six o'clock in the morning until six at night?

17. A lady bought 5 yards of cloth at 67 cents a yard, 3 spools of silk at 12 cents a spool, half a dozen handkerchiefs at $2.64 a dozen. What change should she receive from a ten-dollar bill?

18. Write in numbers LXIX, XLIV, LXXX, VIII. Add.

19. I bought 8 barrels of flour at $6.50 a barrel; 125 pounds of butter at 30 cents a pound; 18 pounds of tea at 62½ cents a pound. Make out a bill and receipt it.

20. Add 79,432, 890,165, 48,734, 9,526, 3,978, and 432,786.

BOOK NOTICES.

Introductory Lessons in English Grammar, for use in lower grammar classes. By William H. Maxwell, M. A., Ph. D., Superintendent of Public Instruction, Brooklyn, N. Y. New York: A. S. Barnes & Co.

It is refreshing to observe a new book entitled "Grammar." We have had for ten or fifteen years a surfeit of textbooks on "Language," and "Language Lessons," but no new *grammars*. The course marked out by Doctor Maxwell comprises three books, viz.: 1. Primary Lessons in Language and Composition. 2. Introductory Lessons in English Grammar. 3. Advanced Lessons in English Grammar. The plan of this book is a good one, and it is well carried out. The author begins with a sentence, and the kinds of sentences, and then considers the several parts of speech. The discussion of the modes, tenses, and conjugations of the verb is postponed, apparently with wisdom, to a later period than usual. The construction process is largely employed, and in all respects the author has shown himself master of the subject and its treatment. The book is commended to the careful attention of all teachers of elementary grammar.

An Illustrated Primer. By Sarah Fuller, Principal of the Horace Mann School for the Deaf. Boston: D. C. Heath & Co.

This little book is a transcript of the work done with beginners in the Horace Mann School for the Deaf, in Boston. All teachers of little children can use it with advantage. The first thirteen pages contain illustrated words which have been carefully selected, and represent all of the vowel and consonant elements. Thus, thorough drill in sounding these words which the child will "read" without difficulty, will enable him to give every sound in the English language correctly, and to associate them with the printed letters. The nine pages following, also illustrated, represent words containing difficult consonant combinations; as drum, desk, etc. There are about twenty pages on which are simple statements, and above each an illustration, representing it. The statements contain much repetition of the words on the former pages. The book closes with short illustrated stories that more advanced pupils will enjoy.

A set of phonetic charts for the wall is now published by D. C. Heath & Co. These consist of a consonant chart, a vowel chart, and a chart for systematic drill upon the different elements. The consonant and vowel charts contain key words, representing each sound. These words are from a child's vocabulary, and a familiarity with them will make it possible to refer a child to the charts, when he wishes to pronounce a new word. The drill chart provides for practice in combining each vowel with all of the consonant elements. It also removes the difficulty that teachers sometimes find with a child who can sound correctly all the elements, but cannot pronounce them as words, when combined. A book containing monosyllabic words, resulting from exercises upon the drill chart, accompanies each set of charts.

METHODS AND AIDS IN GEOGRAPHY FOR THE USE OF TEACHERS AND NORMAL SCHOOLS. By Charles F. King, President of the National Summer School, and Principal of Dearborn School, Boston. Boston: Lee & Shepard. Cloth. Illustrated. Pp. 518. Price $1.60 net.

This is a practical book for the use of practical teachers. It is evidently a *working* book in Geography. It has been prepared to help teachers "to help pupils help themselves," according to the true spirit of the new education. Mr. King believes in making geography interesting to the child, and he tells here just how to do it; what illustrations to use, what selections to read from other books, what topics to treat in detail, and what to pass over hastily. The methods recommended are those adapted to the child's nature. A well arranged course of study is given with all necessary adjuncts for carrying it out.

The chapters on Commercial Geography contain much matter not before accessible to the teachers of the country. How to Conduct a Recitation, is illustrated from actual work in the school, reported by one of the pupils. A striking feature of the work is the exhaustive list of geographical books in the last chapter, classified and arranged so that the teacher may easily find the best work on each country, the best books for a teacher's geographical library, the best scientific books for children as supplementary reading in connection with geography, interesting books of travel for children, etc. A list of books of travel, published in paper covers, contains some forty titles. We have thus indicated to some extent the encyclopædic character of the closing chapters. The illustrations are a valuable feature. A second edition is already out. It is one of the most helpful and valuable aids to the teaching of geography which has yet appeared. It will prove itself indispensable to every well equipped library.

HARPER'S FIRST READER in two parts. Price 24 cents.
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SECOND LESSONS IN ARITHMETIC. An Intellectual Written Arithmetic upon the inductive method of instruction, as illustrated in Warren Colburn's First Lessons. By H. N. Wheeler, Boston. Houghton, Mifflin & Co. Pp. 282. Price 60 cents.

Professor Wheeler has in this book prepared a textbook on the principle that the essentials of Arithmetic should be better taught than heretofore, and that the non-essentials should be omitted. His first aim is to develop the mind of the learner, and he places emphasis constantly on fundamental principles and omits useless subjects and those arithmetical terms which are known only in the schoolroom. He follows the inductive method so admirably illustrated in "Colburn's First Lessons" which has probably done more for the cause of education than any other textbook ever published in America. The book is designed as a continuation of "Colburn's First Lessons." Professor Wheeler is a thorough mathematician, and not simply an Arithmetic maker. He grasps the whole range of mathematics, and has given us here a book on an entirely new plan which is at once original, practical, thorough, and philosophical. While smaller than some textbooks upon the subject, it probably has more examples, and, therefore, gives more practice in the use of numbers than any other textbook in common use. It is safe to say that any class of pupils which shall have mastered "Colburn's First Lessons" and "Wheeler's Second Lessons," will need no further instruction in Arithmetic for the ordinary affairs of life. We commend this book heartily to the careful examination of all teachers and school boards.

MY WONDER STORY. By Anna Kendrick Benedict. Illustrated. Boston: D. Lothrop Company. Price $1.50.

The idea of imparting a knowledge of anatomy and physiology to young readers in the form of a story is unique, but it is successfully accomplished in the handsomely illustrated volume before us. The author imagines a mother with two bright children, who are full of questions, and especially anxious to learn something about the structure of the human frame. The mother is only too ready to gratify them, and they begin their informal studies. First, the bones are considered; then they take up the muscles, fat and skin; the organs that take care of the blood and the blood itself; the process of digestion; the lymphatic system; the nervous system, and, finally, special studies are made of the eye and the ear. At each lesson the microscope is brought into use, and the author has avoided as much as possible all technical terms, and wherever they occur they are accompanied by the corresponding popular terms. The text is very fully illustrated, and the work is admirably fitted for use in schools as a reader or supplementary textbook.

THE CHILD'S SONG BOOK. For Schools and Home circles. By Mary H. Howliston. New York: A. S. Barnes & Co. Price 30 cents.

This little book is especially for the youngest singers. Many of the songs are original. The book is bright, happy, and every way well adapted to interest the little ones. Besides the songs it has a series of marches, games, and recitations.

PRIMARY METHODS IN ZOOLOGY TEACHING. For Teachers in Common Schools. By W. P. Manton, M. D., F. R. M. S., F. Z. S., etc. Illustrated. Boston: Lee & Shepard. 50 cents. Cloth.

This is a capital little treatise. It is a republication of the articles which appeared under the same title last year in *Common School Education*. It deserves and will receive a wide reading.

HOW TO TEACH MANNERS IN THE SCHOOLROOM. By Mrs. Julia M. Dewey. Pp. 100. Price 50 cents.

This little book deals with manners at school, at home, in public, at the table, in society, etc. It is full of suggestions and hints, illustrations, quotations, stories, anecdotes, fables and poems, and it has the usual series of "don'ts."

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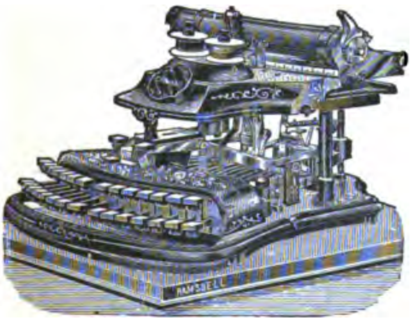

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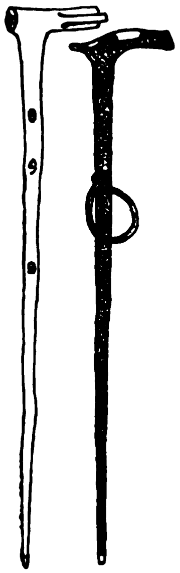
CANES IN SCHOOL.

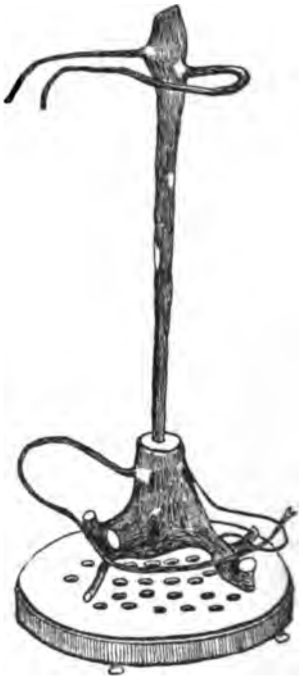
BY N. H. WHITTEMORE, HARRIS SCHOOL, BOSTON.

AS the above-named title may be suggestive of something unpleasant, but at times unavoidable in the schoolroom, the writer will state at once that he proposes merely to tell what he has casually learned about the finding, polishing and finishing of a few varieties of native canes, and also how he has interested, in a measure, his pupils, with a view of teaching them to be observant in their rambles among the woods. For while the average boy may need little instruction in "raising cane *generally*," he may not be quite up to raising this kind *particularly*.

Objective teaching makes exorbitant demands, and the modern instructor is often severely taxed to supply the requisite material. Nothing is so small or insignificant as to be exempt from contributing its mite to the fund of information which every youth is expected to possess. For example: A mosquito's bill under a powerful glass looked as large as a thumb, and much more formidable, and a class of grammar pupils were far more highly delighted and instructed than they had ever previously been by the old-fashioned method of "presenting or introducing the bill."

Two summers ago in the vicinity of the Squam Lakes, New Hampshire, the writer accidentally found a very good maple stick, with a handle shaped by a natural bending at the root, thus forming a very excellent cane. Subsequently other good specimens were found, and it was somewhat surprising that one could find so many pretty sticks with handles characterized by a variety of shapes, the work of Nature's carving. After the sticks had been trimmed, the bark removed, the knots smoothly cut, they were allowed to season for several weeks, after which, by an application of sandpaper, they were in condition to receive the shellac or varnish, and lastly, the ferrule (not *ferule*, for they were innocent). Specimens of these were shown to pupils who were interested in the variety of shapes and different kinds of wood. Beech, maple, sugar plum, apple-tree, moose wood, were the principal kinds. The beech is the most prolific of good canes and grows largely from the roots of the parent tree. By severing this root you may have, if fortunate, a cane with a handle bending nearly at a right angle. Some sticks have many little crooks in them which are not objectionable, provided the general "line of direction" is all right. While remaining, during August last, near the base of Chocorua, the only New Hampshire mountain "whose peak is crowned with a legend," the writer hunted for bears, trout, and canes.





Of the first, he saw no specimen; of the second, a few took the bait, but of the third kind the *hook* was more successful, and representations of some of them are herewith shown.

There is also shown a cane-holder, the parts of which, except the circular pedestal, were found near the base of the mountain.

The two parts being joined are, excepting the pruning and varnishing, as Nature grew them. Those who have seen this, consider it quite unique, and to duplicate it would be a matter of great uncertainty.

The pleasure of collecting these souvenirs was, it must be confessed, not entirely devoid of drawbacks, for such appellations as "crank," "cane-fiend," etc., were not unfrequently suffered as the penalty for the indulgence.

THE RECITATION.

BY W. B. FERGUSON, SUPERINTENDENT OF SCHOOLS, MIDDLETOWN, CONN.

IT is largely in the recitation that the vital, lasting work of the teacher is done. It is here that the mind of the teacher and the mind of the pupil come into living, life-imparting contact, the former to be tested in its powers and attainments, the latter to be directed, quickened, and developed. It is for this important work that the ambitious and devoted teacher studies and plans. Here, waiting before him, are pupils; some active, alert, inquiring, needing guidance chiefly, others cold, sluggish, indifferent, needing inspiration and push. What vast responsibilities, then, centre in the recitation! How can those responsibilities be successfully met? To answer this question is the object of this paper.

It is not my purpose to pass through all the branches of study taught in our public schools, and to explain just how recitations in every study should be conducted. To do this would require more space than is at my disposal. Indeed, all successful recitations conducted by different teachers, or even by the same teacher, cannot be placed in the same mould. There is and can be no best way in detail of conducting recitations in general. There are pedagogical principles which must not be violated in any recitation, but principles may be the basis of many equally good methods. And yet there are certain features which must appear in nearly all successful teaching.

Let us inquire, then, first, what are the leading objects of the recitation, that is, what results should be gained therefrom? and secondly, what are the chief conditions to the obtaining of those results?

The first object of the recitation, in all grades except the primary, is to discover the attainments of the pupils in the subject of the lesson. This is usually made the sole aim by ignorant and lazy teachers. It is so easy to sit calmly with book in hand, and to read off the questions with one eye on the text to see whether the pupil answers correctly. Pupils must learn lessons, and it is the teacher's duty to see that they learn them properly, not so much, however, for the facts to be gained (though these are seldom harmful) as for a more important object, as we shall soon see.

The second object of the recitation, one closely connected with the first, is to firmly fix in the pupil's mind the leading points of the lesson. This is often neglected. Most textbooks fail to sufficiently emphasize the more important parts of the lesson, and to make subordinate the less important. Sometimes one point is the key to the whole lesson, the other facts depending upon and resulting from this one. Pupils usually fail to observe this; to them all facts are equally important; hence, often, none are completely grasped and securely lodged in the memory. The critical teacher will sharply discriminate between the vital and controlling part of the lesson and the subordinate or merely incidental parts. He will concentrate attention upon the former; he will focalize upon it all the light the pupils can give; he will illumine it, if necessary, with his own clear thought and vivid illustration; he will magnify it, cause it to stand out from the connected facts, and, in this way, he will firmly *fix* it in the pupil's memory. The other parts of the lesson being then placed in proper dependent relations to this one are held in the mind in an orderly and philosophical arrangement, contributing to the pupil's intellectual growth.

The third and most important object of the recitation is to train to quick perception, close and accurate observation, clear and logical thinking, in short,—mental development. This object outweighs all others. It is vastly more important than the mere gathering of information. "Were I deprived of my knowledge," said a well-known college president, "I would not be greatly impoverished; but were I to lose the mental power derived from the efforts put forth to gain that knowledge, I would be poor indeed." Says Lessing, "Did the Almighty, holding in his right hand *Truth* and in his left hand *Search after Truth*, deign to offer me the one I might prefer, in all humility, but without hesitation, I should choose *Search after Truth*." Evidently the great German valued the development and discipline to be gained from searching after truth more highly than truth itself.

And, happily, teachers are coming to discover — the better class have already discovered — that children are not mere *phonographs*, doing their highest intellectual work in storing up and reproducing *words;* nor merely collectors of information, but that they are living *spirits*, capable of *growth*, possessing the powers of sight, touch, and hearing, whose sole function is not the detecting and doing of mischief, hence senses not to be closed and lulled to sleep by the teacher but senses to be trained to rapid and certain action, since upon the trustworthiness of their testimony all the higher activities of the soul are largely conditioned; yes, living *spirits* capable of thought, if kindled and aroused into action by contact with the moving, inspiring thought of a genuine teacher.

Other objects of the recitation are, to cultivate the power of accurate, concise, and ready expression (which usually accompanies clear thinking), to discover the pupil's habits of study and to correct whatever is faulty in those habits, to cultivate self-reliance and self-possession, to create interest and *arouse* pupils to heartier and more persistent work, and, in a degree, to develop the moral nature.

Bearing in mind these objects of the recitation, let us now consider the chief conditions to the obtaining of those objects.

The first condition is that the teacher possess some general knowlege of the faculties of the human mind, their action, their order of development, and their proper stimuli. All pedagogical principles of instruction and discipline have their foundation in the nature of the mind; hence, the most important object of the recitation, that of rightly stimulating mental *growth*, is conditioned upon an acquaintance with the mental powers. How can the perceptive powers be quickened and properly guided; the memory made tenacious and ready; the imagination excited, elevated, and broadened; the reason trained to unerring logic; the feelings deepened, refined, and brought under control; the will strengthened and made to respond to high motives and to resist the lower; in short, how can the *entire* nature of the pupil be — not to say symmetrically developed, an interesting thing to think and write about, but a result quite impossible to accomplish — but developed in their natural order with anything like the least loss of mental energy, except the teacher have some general knowledge of the mental faculties, their modes of activity, their inter-dependence, their order of development, and their proper nourishment. From a lack of such knowledge, the observing powers are often stunted; artificial memory is trained to the exclusion of the philosophical; the imagination, so active in children, is repressed and thus made incapable of forming lofty ideals; the reflective powers are insufficiently developed; the egoistic feelings are often encouraged to the utter exclusion of the altruistic and the ethical; while the will, instead of being strengthened and rightly guided, is either broken, thus making the coward, or it is uncontrolled, becoming master of the future criminal.

Only, then, through the possession and exercise of such knowledge, gained in some way, can the teacher meet the first condition of the most successful recitation.

The second condition is thorough, *daily preparation* on the part of the teacher. This statement perhaps seems trite to some, but its practice is not trite to all teachers. I have visited not a few schools in our own state and elsewhere, and, while I have been gratified to see evidences of some preparation by most teachers, I have seldom failed to detect an entire lack of preparation for some recitations. In reading, for instance, lessons upon which fifteen or twenty minutes of careful study could have been profitably put had not been looked at until the classes stood in the floor to read; hence, an unattractive and ineffective way of teaching new words, mistakes in emphasis and inflection, silly and irrelevant questions, a shallow pretence of interest, and, of course, little or no interest on the part of pupils, in short, all the essential elements of good reading omitted. This, too, in some of our so-called best city schools, not in backwoods districts, where the teacher has thirty or forty recitations a day and two dollars a week. When a teacher stands before his class, he should know pretty definitely *what* he is to teach and *how* he is to teach it, otherwise his instruction is diffuse, indefinite, hap-hazard, not like the arrow that flies straight to the mark and finds lodgment, but, like the snowball, it covers much surface, but leaves no lasting impression. It is a common saying that one cannot teach what he does not know, but still further, he cannot teach broadly and critically what he does not know thoroughly, and this thoroughness nothing but daily preparation in and outside of textbooks can give. One who does not thus prepare himself for his daily work lacks that genuine, burning, and contagious *enthusiasm* so necessary to *arouse* pupils to energetic, interested mental activity in the recitation, without which little benefit results. He not only has no enthusiasm for his work, but he positively dislikes it. He goes to his daily task like a "galley slave scourged to his dungeon." "Not so," says Superintendent Dutton, "with him who makes a judicious plan for each day. He goes to his work with conscious strength. His pupils are expectant, and feel that they are sitting at the feet of a genuine teacher."

It is unnecessary to discuss the needed preparation on the part of pupils. Most teachers appreciate the importance of pupils preparing their lessons whether they prepare themselves or not. Poor teachers, however, are apt to accept a mere verbal or a narrow preparation, such as can be made by slavishly following the textbook. *Ideas*, not words merely, characterize every successful recitation, and the larger use of supplementary books, the better.

The teacher stands before his class prepared for the recitation; the pupils have prepared their lesson. What is now needed? This brings us to the third condition, viz., the *concentrated mental activity*, or the undivided attention of the whole class, the hardest condition to be fully met. Such attention, however, is absolutely necessary to the most effective teaching. This word *attention* signifies from its derivation a *stretching* of the mind toward some object of observation or thought; hence, an *active* condition of the mind. It is a mistake, then, to suppose that attention consists in a particular position of the hands and feet, posture of the head, or direction of the eyes, though these may favor attention. It consists, rather, in mental activity in observing, comparing, generalizing, recalling, imagining, or reasoning in respect to some particular object of thought before the class; and it is a psychological fact that accuracy of observation, clearness of thought, readiness and tenacity of memory, and intellectual growth are in proportion to the degree of mental concentration. I stop to emphasize this point, because its importance is not fully appreciated. It is not an unfrequent sight to see a whole class, except the one pupil reciting, half asleep. All may be sitting erect, hands and feet in position, eyes properly directed, while the thoughts are miles away, or, at best, resting lightly on the lesson. Some teachers are deceived by this seeming attention, and not a few are apparently satisfied with it. The recitation should be the time for the keenest, severest *work*. The teacher should furnish the *conditions* of knowledge and give proper guidance, while the pupils should do the observing, comparing, recalling, inferring, and reasoning; thus will their interest be kindled and sustained, and the zeal and confidence resulting from successful personal effort will be theirs; thus will they be stimulated to stronger, heartier, and more persistent endeavor, and the result will be rapid intellectual growth. Failure on the part of the teacher to secure this *self-activity* of the pupil means almost *total* failure in the recitation. Effective teaching, as I have said, is impossible until this is secured. "Indeed," says one, "teaching is nothing else than promoting human growth through attention." The attention of the youngest pupils is largely involuntary, flitting from object to object. The power of self-direction of intellectual energy is weak; but, if the teacher so plans her exercises as to attract and hold her pupils' attention, at first for a few minutes only, afterward for a little longer time, and so on, the power of voluntary, concentrated attention will, at length become more or less easy and constant. And, if the schools do not develop this power, they fail in a most important part of their work, and pupils enter upon the active pursuits of life ill prepared to solve the difficult problems that are sure to present themselves to those who aspire to large success. Says Schiller, "The thunder, spread out into its separate folds, becomes a lullaby for children; send it forth in one quick peal, and the royal sound shakes the whole heavens." So the pupil who would make the most of his time in school, and who would attain a high degree of success in the world must be taught to throw his intellectual energies, like the focussed rays of the sun, upon a single point, and to hold them there, until the desired object is accomplished.

The attention of the class being secured, what next? The teacher must *not* lecture. Such instruction appeals only to the so-called passive attention, not to the active, the investigative attention at all. It may increase the pupil's stock of information; it may broaden his intellectual horizon temporarily, or even permanently, but it cannot greatly increase his intellectual *power*, which is of chief value. Young teachers, particularly college graduates who think ideal teaching consists in imitating some learned college professor, often make this mistake. Such a teacher once informed me that she often had a sore throat at night, caused by her being obliged to talk nearly all the time to her classes in order to teach them anything. Not realizing that the teacher should place before her pupils the *conditions* of knowledge chiefly, sparingly knowledge itself, not realizing that the mind is a living organism, growing and gaining strength through exercise like the body, and not a receptacle to be filled, she proceeded on that ever to be condemned plan of lecturing, stuffing the pupils with sense and nonsense. Such a teacher, of course, thinks it necessary to keep a large portion of her pupils after school every night, than which no habit can be much worse. Something is radically wrong with the teacher who finds it necessary to habitually resort to such means in order to induce pupils to learn their lessons. Their interest in study must be sadly lacking, and for this the teacher is largely responsible.

But to return to the matter of lecturing. Says Spencer, "This need of perpetual telling is the result of the teacher's stupidity, not the pupil's. Having by our method induced helplessness, we straightway make helplessness a reason for our method." While there are reasons why lecturing in college, and, occasionally in the high or the grammar school may be proper from a pedagogical standpoint, it can be safely said that all lecturing that relieves the scholar of work, and that deprives him of that intense interest and large mental growth that results from successful personal investigation and discovery is harmful. A splendid talker is quite often a very poor teacher. The ideal teacher is one who can talk entertainingly, for he is full of his subject, but he seldom does talk at any considerable length, for he remembers the teacher's golden maxim, that "He helps a pupil most, not by doing for him, but by inspiring him to do for himself." "Self-activity, self-evolution, and this alone," says Spencer, "insures vividness and permanency to impressions. Knowledge thus acquired becomes at once organized into faculty, ready to aid in still keener observation, closer comparisons, broader and truer generalizations, and more logical reasoning, and does not lie, like a dead weight, upon the memory."

There are, in general, three methods of conducting recitations: the questioning method, the topical method, and the discussion. The first, skilfully employed in connection with the other two, is valuable, but exclusively used, it is harmful. Poor teachers, as a rule, employ this method too exclusively. It requires little information on the part of either teacher or pupil, for the teacher usually has one eye on the book and asks leading questions in such a way as to suggest the answer. But with the skilful teacher, questioning is an art, and one not easily acquired. Just how to question so as to reveal the pupil's previous knowledge, at the same time kindling curiosity and arousing the intellect into a wakeful condition creating a desire to know more; just how to lead the pupil from point to point in a line of thinking, giving him all needed assistance without relieving him of the necessity of putting forth earnest effort; just how to question so as to most securely link the leading facts of today's lesson with those of yesterday; just how to lead the pupil to say as much as possible to the point, while the teacher says as little as possible, is a question which requires for its answer much careful study of both pupil and lesson.

The following recitations reported by Agent Martin, of Massachusetts, as having been heard by him in a city high school of that state, illustrate the *misuse* of the questioning method. A lesson about a Greek philosopher, teacher with book in hand questions as follows: —

"Who was an eminent philosopher, and taught mathematics and astronomy?"

One Pupil. — "Diogenes."

Teacher. — "No, Anaragoras! Who was Diogenes? Can any one tell?"

Several Pupils. — "He lived in a tub."

Teacher. — "Yes; he was a famous cynic. Who was called the laughing philosopher? Can any one tell?"

No answer.

Teacher. — "Democritus; because he treated the follies and vices of mankind with ridicule. He taught that the physical universe consists of atoms, and that nature, space, and motion are eternal."

In another high school, the following recitation on the reign of Charles I.: —

Teacher. — "This is known in history as the ——"

Answer. — "Long Parliament."

Teacher. — "The king ungratefully gave his consent to his ——"

Answer. — "Execution."

Teacher. — "The king retired amid cries of ——"

Answer. — "Privilege."

I believe these recitations fairly illustrate a large part of the work done by those who have not made a *study* of teaching.

The topical method is especially well adapted to develop readiness in thinking, self-reliance, and self-possession. The pupil is placed face to face with his subject, and he succeeds according to his knowledge of the subject, his self-command, and his readiness in speech. He is trained in correctness and facility of speech, and, in a degree, he is practiced in extemporaneous speaking. He is also obliged to take a somewhat larger view of the subject.

The discussion is profitably used, in the higher grades, in connection with the two other methods. It tends to give increased life and interest to recitations upon certain subjects, and, if properly conducted, it teaches pupils to yield to the force of reason. Which of these methods should be made most prominent in a particular recitation, largely depends upon the character of the lesson, and the maturity of the pupils. While the topical method supplemented by the other two is best suited to a recitation in history, the questioning method is chiefly employed, though wrongly, I think, in teaching the ancient classics. While neither the topical method nor the discussion can be used to any considerable extent in the primary grade, the three should be combined in the higher grades.

The number of devices and expedients that may be employed in the application of these three general methods is almost infinite, and many are equally good. In so far as they conform to pedagogical principles, they are proper, and in so far as they are effective, they are valuable. To pronounce this particular method or device in teaching the *best* is the merest folly. What to one seems absurd, to another appears reasonable and valuable. Is the method based upon right principles? Is it, in a degree, original? Is it the way in which the teacher's best thoughts, deepest interest, and most glowing enthusiasm go? With it, does he accomplish his best results? If so, then it is *his* best method, however it may appear to others.

But any method is empty and futile, *dead*, unless filled and *vitalized*, and made effective by an unquenchable interest and enthusiasm on the part of the teacher; an enthusiasm that shows itself, not in noisy, highly demonstrative, and egotistic bluster, attracting attention from the lesson to the teacher, or causing unhealthful excitement, but a deep and intense interest that forgets self, centres in the subject and the *pupil*, and rivets attention on the lesson, an interest, not of the head to the head alone, but also of the *heart* to the heart, and through it reaching and moving the will. Without this genuine, consecrated interest, the teacher is only sounding brass or a tinkling cymbal; with it and through it, he becomes a fashioner of intellectual and moral character.

SCHOOL-ROOM WORK — HOW — WHY?[1]

BY N. A. CALKINS, LL. D.

I.

HOW DO YOUR PUPILS LEARN?

THIS question is intended for each teacher. It is for you. If it be intelligently considered, and the necessary observations made to determine what is the true answer in relation to your pupils and your work, an exceedingly important step will be taken toward a clear and definite understanding of your own work as a teacher. Such self-understanding is necessary that you may secure, uniformly, real progress of your pupils, and permanent success as a teacher.

You now endeavor to do your work earnestly and faithfully, and to teach your pupils correctly and thoroughly. All this is granted as true in your case. Nevertheless, please allow me to direct your attention definitely to portions of your school-room work, while you consider, in the light of such guidance, whether or not your methods of presenting the subjects of instruction to the pupils *cause them to exercise the right powers of their minds in relation to each subject.*

You understand that some things must be learned through the exercise of one sense, and that other things must be learned through the exercise of other senses. You know that there are appropriate powers of mind for the learning of all the different kinds of knowledge; that the mind learns some things through the sense of sight, — some, through the sense of hearing, — others, through the sense of touch, or taste, or smell; also, that some things must be learned through the exercise of two or more senses. Do you remember these facts while teaching your pupils?

You also understand that there is a wide difference between knowing the *properties* of an object or knowing the real object, and knowing the *name* of the object. Of course you would not attempt to teach a child *colors* by merely telling him the names of colors, even though the pupil learns to spell these names and to classify the colors, since you know that colors must be perceived and distinguished through the sense of sight. Neither would you attempt to teach a child to sing by requiring him to learn the *names* of the notes of the scale, even with all the definitions *about* vocal music added, when you know that musical sounds, as well as all other sounds, must be learned through the sense of hearing. But when you teach *Arithmetic*, or *Geography*, or *Spelling*, do you carefully consider how the child must get his knowledge of these subjects in order to know that which is *real* in them?

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[1] Copyright, 1887, by N. A. Calkins.

In order that you may more clearly understand my meaning in relation to teaching these subjects, let us take that of spelling and consider it under the following heads, viz: —

First. — What does the child know that relates to spelling when he begins school attendance?

Second. — What does the child *need to learn* in relation to spelling to prepare him to use it as he will need to do in daily life?

Third. — How can the child be taught to know spelling so that he will be able to use it readily and correctly?

What the Child Knows. — By observing children before they begin school attendance, we learn that their vocabulary of words known by hearing, and by use in conversation, contains a very much larger number of words than it is generally supposed that they have acquired. It is probable that the number of words thus known by the average child of American parents, at the age of six years, embraces from four to five hundred. Some children, at this age, are known to use from six hundred to a thousand words. *The known to the child*, that which should be used in the beginning of teaching spelling, is these common words. He knows the words when he hears them. He shows that he knows their meaning by his use of them.

What the Child needs to Learn. — As in *Reading*, the child needs to learn the *words by sight*, which he already knows by hearing and use, so in *spelling*, the child needs to learn *by sight the several letters* of the given words in their relative positions, and how to form the words by writing these letters.

How the Child may be Taught. — The child should be taught in spelling, to name the letters *by sight* which form words that he has learned by sight, as whole words. *He should not be taught to spell words from hearing before* he has learned to spell them *by seeing*, and from memory *through sight.*

Good methods of teaching require pupils to gain their first knowledge of that which is to be taught through the exercise of the sense which is the natural channel of the knowledge. Other senses may aid, subsequently, in gaining more complete knowledge; and such senses should be brought into due activity in the work of learning.

The teacher of a class of the youngest pupils in school might select for a lesson in spelling the words *doll* and *top*. After writing the words on the blackboard, and the pupils have learned them by sight, she may point at each letter in a word and require the pupils to name these in their order. Then individual pupils may be requested to pronounce the word, and to name the several letters in it. After the word has been spelled *by sight* several times, individual pupils may be asked to try to spell the word with the back turned toward it. If carefully managed by the teacher the pupils will readily *learn the spelling through sight.* For this exercise it is better to have two or more words before the class, that they will have to notice carefully the given word.

After the pupils can spell the words *doll* and *top*, singly, the teacher may inquire who have dolls and tops; and whose doll, and whose top each has. Then the words may be written on the blackboard so as to read *my doll*, *my top*. When the pupils can read both of these pairs of words readily, they may be shown how to spell the two words together, as if they formed a word of two syllables. This spelling must also be done at first *by sight*. The two words are to be pronounced by the pupil, and spelled as follows: "my doll; m y, my, d o l l, doll, my doll"; "my top; m y my, t o p, top, my top." After these words have been thus read and spelled by several pupils, they may be asked to try to spell them from memory, without looking at them; or to spell with the back turned towards the words.

Copying the words on slates; and spelling them from dictation, should follow in due time; thus training the children *to know*, and preparing them *to do* that which they will need *to practise* in daily life.

It does not follow that your teaching is faulty because you do not use the methods which have been described here to illustrate my subject. There are many modes of teaching that are in accordance with the principles stated herein. Now, please to consider carefully your methods of teaching, and ask yourself, and answer this question—"*Do my pupils learn through the appropriate senses?*"

METHODS OF TEACHING ARITHMETIC IN PRIMARY SCHOOLS.[1]

BY LARKIN DUNTON, LL. D.,
Head Master of the Boston Normal School.

XX.

DIVISION.

BEFORE beginning the division of numbers between 1 and 1,000, a careful review of the division of numbers from 1 to 100 should be made; for the teacher cannot too often remember that the new is always to be united with the old.

DIVIDING BY TWO.

The first thing to be done here is to make clear to the children, and then give them ample practice in finding, the half

a. Of 2, 4, 6, 8, 10, 12, 14, 16, 18, — units.
b. Of 20, 40, 60, 80, 100, 120, 140, 160, 180, — tens.
c. Of 200, 400, 600, 800, 1,000, — hundreds.

This done, the following problem and solution will show the proper treatment of numbers which should follow: —

Divide 573 by two.

The number 573 consists of 5 hundreds, 7 tens, and 3 units. We must first divide four of the five hundreds; half of 4 hundreds is 2 hundreds = ... 200
1 hundred = 10 tens; 10 tens and 7 tens make 17 tens.
Half of 16 tens is 8 tens 80
One ten remains, equal to 10 units; to which add 3 units,
and we have 13 units. Half of 12 units = . . . 6
Half of 1 = ... ½

Half of 573 = 286½

In order to bring the pupils to the point of facility in the strictly mental division of numbers from 1 to 1,000, it is necessary for them to use the greatest brevity of thought and expression; hence they should soon be taught to separate the number to be divided into divisible parts without the use of the words "hundreds," "tens," and "units." The written expression of the work given above will then assume the following form: —

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[1] Copyright, 1887, by Larkin Dunton.

$$\begin{array}{l}
\frac{1}{2} \text{ of } 573 = \\
\frac{1}{2} \text{ of } 400 = 200 \\
\frac{1}{2} \text{ of } 160 = 80 \\
\frac{1}{2} \text{ of } 12 = 6 \\
\frac{1}{2} \text{ of } 1 = \frac{1}{2} \\
\hline
\frac{1}{2} \text{ of } 573 = 286\frac{1}{2}
\end{array}$$

From the preceding we derive the following: First divide the hundreds which are divisible without a remainder; reduce the hundreds which cannot be directly divided to tens, and to these add the tens; divide what of the tens can be divided without a remainder; reduce the rest of the tens to units, and to these add the units, etc.

The following figures will show how thoroughly the foregoing work prepares the pupils for the usual written form of division:

$$\begin{array}{l}
573 \div 2 = 286\frac{1}{2} \\
4\,.\,. \\
\hline
17\,. \\
16\,. \\
\hline
13 \\
12 \\
\hline
1
\end{array}$$

After the detailed explanation in regard to division of numbers from 1 to 100, it must be unnecessary to go further into detail here. If the practice there recommended is here reviewed, the pupils will now generally find no difficulty in dividing numbers below 1,000 by 3, 4, 5, 6, 7, 8, 9, 10, or by 20, 30, 40, etc., to 100. It will sometimes happen, however, that children will come from an unskilful teacher, or will be generally so dull that it will be desirable, at this stage, to introduce division first by 2, then by 3, etc., to 10, and to drill on each number by itself. In such case, it is recommended that the divisible hundreds, tens, and units be treated at first by themselves; for example, the division, by 3, of

a. 3, 6, 9, 12, 15, 18, — units;
b. 30, 60, 90, 120, 150, 180, — tens;
c. 300, 600, 900, — hundreds.

So may the division by the other units be introduced, and frequently with profit.

Practical problems are necessarily omitted in these papers: but they are by no means to be omitted from the pupils' work. The young teacher is earnestly recommended to make use of books of problems, and not to rely solely upon his power of invention. Such books should be used a part of the time by the pupils themselves. In this way the power of reading and of interpreting the written page is developed. A part of the time the problems should be read to the pupils by the teacher. If, now, the teacher adopts the invariable practice of reading a problem but once, the pupils' power of attention will be greatly strengthened.

The material for mental work in all the fundamental rules can be indefinitely increased by the use of Chart XIII., as has been explained heretofore. The pupils can use it as the basis of thousands of examples to be performed in school upon the slate, which take the place of mental work without the slate. More of such exercises in the fundamental rules will now be suggested.

ADDITION.

To 365 add each number on Chart XIII. That gives 100 problems in addition. Now, instead of 365, each number from 101 to 1,000 may be used; which gives 900 × 100 = 90,000 additions.

The correctness of the results may be proved at the end of the hour by letting the pupils change slates and read the answers through.

SUBTRACTION.

Let each number on Chart XIII. be subtracted from 365. Then, in place of 365, use each number from 101 to 1,000, and we have, in all, 900 × 100 = 90,000 subtractions.

MULTIPLICATION.

Multiply each number on the chart by 2, 3, 4, etc., to 12, and we have 1,100 multiplications. Write 1, 2, 3, 4, etc., to 12, before each number on the chart, and multiply by 2, 3, 4, etc., to 12, and we have 121,000 multiplications.

DIVISION.

Put the figure 1 before each number of the chart, and divide the resulting number by 2, 3, 4, etc., to 12, and there are 1,100 divisions. Replace the 1 by 3, 4, 5, etc., to 12, successively, and we have 11 × 1,100 = 12,100 divisions.

The ingenious teacher will be able to save time and labor in other ways by the use of this chart.

WRITTEN AND MENTAL ARITHMETIC.

Heretofore written and mental arithmetic have not been separated. The form of the written exercises has corresponded strictly to the course of thought in the mental exercises. It is possible, however, to manage the written work in such a way as to save both space and time. But, although this saving is important, it is not to be gained at the expense of clear understanding. The mind of the learner needs to be prepared beforehand for obtaining a clear insight into the reasons for the shorter processes of written work, which are of special advantage in dealing with larger numbers; and on this account their consideration has been postponed to a later stage.

Sometimes the terms mental arithmetic and written arithmetic are set over against each other, as though they stood for two distinct kinds of arithmetical work. Such a division, however, is incorrect; for all arithmetical computation is made by the mind. The use of the terms oral arithmetic and memory arithmetic on the one hand, and of slate arithmetic and figuring or ciphering on the other, is often faulty for the same reason.

It is true that sometimes figures are used to assist the memory in retaining the numbers under consideration, and at others the work is done by the mind without such help; and perhaps no better terms have been invented to indicate these two facts than the old names of written and mental arithmetic. It is certain that the use of no other terms would change the facts, or make the two processes either more or less alike.

What problems belong to written arithmetic and what ones to mental arithmetic depends upon the ability of the pupils to hold in the memory more or fewer, larger or smaller numbers. Then, too, a pupil well drilled in mental arithmetic will often solve problems without the use of figures, when others would require the aid of pen or pencil. There can no absolute limit to either class of problems be drawn. In general, however, it is sufficient if the problems of ordinary business, which do not involve numbers larger than a thousand, can be solved without the aid of figures; though, of course, problems may sometimes be solved mentally which involve much larger numbers.

It certainly is well for all practical business men to be able to use readily numbers below 1,000, without recourse to written figures. In order to secure this ability, work in written arithmetic, with its own proper methods, has been deferred to a later period than usual. After practice in numbers below 1,000 has given the pupils skill in mental computation, and a clear comprehension of its principles, insight into the principles of written arithmetic will be gained much more easily.

In order that the acquired facility in mental arithmetic should be retained, it is absolutely necessary that mental arithmetic, in the narrow sense of the term, should be closely connected with written arithmetic, whether instruction in the two kinds of work is given in the same or in different hours.

Written arithmetic, as well as mental arithmetic, should not be practised mechanically, so that the operations are performed merely by rule. The shortened processes of written arithmetic should be developed out of the processes of mental arithmetic which have already been explained. If this is done, the scholar will come to know not only the processes and rules, but their reasons. The pupil is never to work by a rule, like a mathematician by his formula, till he understands the reason for his procedure and for the rule.

War is to be continually waged against all mechanical management of mathematical instruction, and against all learning of facts without reasons; yet, in the four fundamental operations of arithmetic, the pupil is to attain an ease and a rapidity of working which closely resemble that of a perfect machine; so that all his mental power may be given to the reasoning processes which the solution of the problems may require.

If the work previously suggested has been well done, the pupils are now prepared to enter upon the stage of written arithmetic proper, and readily to understand its processes.

THE HISTORY OF OUR COUNTRY: HOW TO TEACH IT.[1]

X.

LOCAL HISTORY FOR PRIMARY CLASSES.—IV.

BY NINA MOORE, AUTHOR OF "PILGRIMS AND PURITANS."

WITH the third year the class entered upon a different method of work. Heretofore they had merely listened to and repeated orally the Boston stories. They were now to learn to extract them from the printed page, and to reproduce them in writing.

Our first readings took us back to our old friend William Blackstone. Indeed, the whole course of readings necessarily and intentionally followed quite closely that of the stories told in the previous years.

In the first lesson we read but two pages of the little pamphlet which had been prepared especially for the class. The map of Boston, old and new, occupied much of our time and several subjects came up for brief discussion. Among other matters we touched that of the religious intolerance of the earlier age,—lightly, yet definitely enough to enable the children to realize the change that has taken place since then. Definitely enough to ensure their looking back later to their childish impressions of the gradual bettering of the world and recognizing their import, yet lightly enough to avoid overstraining. A child's perceptions are very keen. He can observe for himself that many things are better than they were formerly; but it would be a mistake to lead him into generalizations concerning universal progress. In teaching history to a child, as in teaching science, success lies in travelling through facts or phenomena towards the higher level whence we discern traces of an underlying plan; yet this must be done without in the least urging the immature mind into processes of thought for which it is unprepared.

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[1] Copyright, 1888, by William A. Mowry.

The second lesson proceeded at a more rapid pace; five or six readings carried us through the story, and then came the writing.

As a training in careful wording and orderly arrangement of ideas, this first writing was made a class composition. In turn, the children gave their sentences. Some of the sentences were rejected because of hopelessly careless construction, some had to be discussed and remodeled by the class before they could be used, some were accepted at once and written upon the board. From this common source the children wrote their accounts of William Blackstone. Most of the class simply copied what was before them. A few begged to be allowed to interpolate sentences of their own, to make the narrative fuller; the more fluent were allowed to do so.

The attitude of self-forgetful admiration for great men and stirring times is a healthful one for any child; and John Winthrop lost none of his charm for the class by appearing between the covers of a book. In the second composition the genuine admiration which the children felt for Winthrop was plainly shown, and in various ways, for here each child wrote upon his own responsibility; first, perhaps, whispering his sentences in my ear before committing them to paper.

"John Winthrop was a Puritan. All puritans in those days were treated badly. They were not allowed to have meetings, and they could not preach the way they wanted to. So they went away to make a new city," begins one of these attempts. "A very bad winter soon closed upon them. . . . . Their chief food was Indian Corn (?). That nice Indian corn was now gone. The children were glad to dig clams where they could. Governor Winthrop was distributing the last handful of meal in the barrel to a poor man, and, wonderful! the same moment a ship was seen at the harbor's mouth. It was the Lyon, which so long ago was sent back for more food," runs another.

The pictures drawn this year, in illustration of the text were very ingenious. There was a series of drawings representing, first, a thief before Governor Winthrop's wood-pile, with eager fingers, as long as his body, extended towards the logs, while above him, to give the idea of night, shone the accusing moon and the impartial stars; second, a room with John Winthrop seated in a grand chair and listening to an informer who tells him of the theft,—Winthrop points an awful finger, commanding, terribly, "Go bring that man to me!" (this is the name of the picture, written underneath); and third, the culprit tremblingly entering the room while the Governor, having descended from the chair of state, advances half way to meet him, saying, (as we are informed in script), "Friend, it is an hard and long winter, I doubt not you are but meanly provided with wood; pray supply yourself at my wood-pile until this cold season be over."

There were a score of good conceptions. Only one more may be described,—it was a picture of rising ground, occupied by several tents and two casks; the casks at the foot of the incline, and each showing a pair of heels protruding from its open end. Under the picture was the sardonic title, "The *houses* at Charlestown." It was in memory of the time when "the multitude put up tents and booths around the Turn Hill" and several were "glad to lodge at night in an empty cask." Besides these drawings, the children, in odd moments, enjoyed sketching the map of Shawmut upon the board, keeping their half-finished outlines from day to day, and adding to them when they could find the time. Some of the outlines were surprisingly correct.

Little that is new remains to be said of the reading and writing of the stories of the Revolutionary and Antislavery days; yet the maturer thought with which these children re-entered both subjects may give value to a few more comments on the remaining year and a half devoted to them.

Notwithstanding the inability of the class to read with adequate appreciation Mr. Scudder's charming book, we stumbled through his interesting accounts of the Stamp Act, the Boston Massacre, Sam Adams' Regiments and the Boston Tea-party, and by the dint of repetitions and explanations obtained a great deal from Boston town.

Perhaps a few examples of the writer's abstracts will show better than anything else what the children were able to understand and retain.

Here is one by a boy eight years old:

"THE STAMP ACT.

"The Americans did not want the English king (he should have said Parliament) to tax them, they wanted to say how they should pay the king some money.

"The tax was, to put certain stamps on every business paper.

And one day some people saw two images hanging on Liberty Tree. One was a big boot with some horns thrust out of it, and the other was a stuffed figure meant to look like Andrew Oliver, the boot was to make fun of Lord Bute, who lived in England.

"In the evening the Sons of Liberty came and took the figures down and made a procession and carried them away, to the frame work of what was going to be the stamp office and carried the timbers to Oliver's house where they made a fire and burned the figures.

"And then the English repealed the Stamp Act."

Here is another by a boy of about the same age:

"THE BOSTON TEA-PARTY.

"The chief tax was on tea. The Americans would not pay the tax. In England there were warehouses full of tea. The king of England would not let the Americans buy tea from any other country but England.

"Thursday, Dec. 16, 1773, the people flocked in the Old South Church to hear what Mr. Rotch said. He said the Collector of the Port would not give him papers for him to sail off. Mr. Rotch wanted to see the governor about it, so the people sent him off. Six o'clock came and he did not come back. Quarter after six came, and he came with a sad face and said that governor Hutchinson had said no.

"Sam Adams stood up and said, 'This meeting can do nothing more to save the country.' Just as he said this a war whoop was heard, and forty or fifty Indians were seen running down to Griffin's Wharf. They jumped on board the tea ships and chopped the boxes open, and threw them overboard into the sea."

When we came to the story of the ride of Paul Revere, we read Revere's own letter, re-printed for the class. After this, in the dearth of material suitable for such young children, the lecture method was resorted to; the Battle of Lexington, which included the Concord fight and the retreat to Charlestown was recounted and written, and after that followed similar treatment of the Battle of Bunker Hill and the Evacuation of Boston.

Passing to the close of the Revolution we next reviewed the "Old Thirteen" and discussed the action of Massachusetts in consenting to the compromise which incorporated in our constitution a recognition of slavery and gave protection to the African slave-trader for the twenty ensuing years.

Young America did not relish the bare and bitter facts, the spirit of the Revolution had filled the heart with pride; but facts are often salutary,—the necessary fall only brought opinion to its just level.

For reading, now, we had Mr. Garrison's account of the mob in Boston in 1835, a sketch of Shadrack and another of Anthony Burns. With this scant material we were obliged to content ourselves. Meagre as it was, it took strong hold upon the imagination of the children; they gained some idea of the tremendous accumulating power of an over-riding and neglected wrong; and some conception of the strange tricks men's minds and consciences will play them when great interests are at stake.

The four lines which Garrison wrote on his cell wall,—

> "Confine me as a prisoner,—but bind me not as a slave.
> Punish me as a criminal,—but hold me not as a chattel.
> Torture me as a man,—but drive me not as a beast.
> Doubt my sanity,—but acknowledge my immortality."—

brought the slave's wretchedness and the mental attitude of both north and south more forcibly before the class than anything else that they read.

The last line puzzled them. When they fairly understood that there were many people who hardly thought that the negroes had souls, or could live hereafter their cheeks burned and paled with indignation. "I think they had better souls than the men who could think that about them," one little girl exclaimed.

With the story of Burns the four years' course was ended. It had been in many respects incomplete, it was designedly fragmentary; but it was in some sort a preparation for the study of United States History which the class took up systematically during the following year.

"AND wish you health, and love, and mirth,,
As fits the solemn Christmas-tide.
As fits the holy Christmas birth,
Be this, good friends, our carol still:
Be peace on earth, be peace on earth,
To men of gentle will."

PRACTICAL METHODS OF TEACHING SPELLING.[1]

BY ANNA B. BADLAM,

Rice Training School, Boston, Mass.

VII.

THE SUFFIX ED.

Lesson 60. Action words — the forms for present and past action.

A short.	*E* short.
land landed	end ended
hand handed	mend mended
sand sanded	tend tended

I short.	*U* short.
hint hinted	hunt hunted

Lesson 61. Action Words and their Forms. — *A* short.

land lands landing hint hints hinting
hand hands handing hunt hunts hunting
mend mends mending tend tends tending

Lesson 62. Name Words and their Forms. — *A* short.

land lands landing hunt hunter hunters
hand hands —— —— tender tenders
hint hints ——
—— —— mending

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THE SUFFIX Y.

Lesson 63. Words showing the Condition or State of Things.

U and *I* short.

dust	dusty	must	musty
rust	rusty	mist	misty

THE SUFFIX ED. (ed = d.)

Lesson 64. Action Words — The Forms for Present and Past Action. — *A* long.

tame	tamed
name	named
blame	blamed

THE SUFFIX ING.

Lesson 65. Action Words that end with silent E.

A and *I* long.

tame	taming	shame	shaming
name	naming	flame	flaming
blame	blaming	ride	riding
skate	skating	slide	sliding

N. B. — Question the pupils in each case until they perceive that final *e* is omitted when *ing* is added.

UNION OF AY. (ay = ā.)

Lesson 66. The Initial Letter changes. — *A* long.

hay play day way

lay stay say pay

Lesson 67. Words used as Stems to form new words, by means of the various Suffixes. — *A* long.

hay	haying				
lay	laying	lays	layer	layers	
play	playing	plays	player	players	played
stay	staying	stays	—	—	stayed
day	—	days	—	—	—
say	saying	says†			

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† Change of pronunciation.

UNION OF AI. (ai = ā.)

Lesson 68. The Initial Letter changes. — *A* long.

rain	stain
train	gain
drain	aim
pain	claim

Lesson 69. Words used as Stems to form new words, by means of the various Suffixes. — *A* long.

rain	rains	raining	rained	rainy	
train	trains	training	trained	—	trainer
drain	drains	draining	drained	—	—
pain	pains	paining	pained	—	—
stain	stains	staining	stained	—	stainer
aim	aims	aiming	aimed	—	—
claim	claims	claiming	claimed	—	—

THE SUFFIX FUL.

Lesson 70. Words telling the kind formed from Name Words.

A long.

play playful rest restful
pain painful help helpful

THE SUFFIX LESS.

Lesson 71. Words telling the kind formed from Name Words.

A long.

pain painless
rest restless
help helpless

THE LONG SOUND OF E. (ē, ee.)

Lesson 72. The Initial Letter changes.

1. *E* long.

he we
be she

2. ee = *E* long.

bee free wee
tree glee
see fee

Lesson 73. The addition of a Final Letter. — *E* long.

see fee bee wee
seem feel beet weed
seed feed beef weep
seek feet been† week

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† Change of pronunciation.

Lesson 74. The Initial Letter changes. — *E* long.

seed
heed
need
deed
bleed

weep
peep
keep
deep
sheep

creep
sleep
steep

feet
beet
meet
greet

UNION OF EA. (ea = ē.)

Lesson 75. The Initial Letter changes. — *E* long.

tea
sea
pea

Lesson 76. The Initial Letter changes. — *E* long.

eat
meat

beat
seat

neat
heat

Lesson 77. The Initial Letter changes. — *E* long.

ear
fear

hear
near

dear
year

Lesson 78. The Initial Letter changes. — *E* long.

each
reach

teach
beach

peach
preach

Lesson 79. The Initial Letter changes. — *E* long.

1.

east
beast

feast
yeast

2.

beam
gleam

cream
dream

METHODS IN GEOGRAPHY.[1]

BY LARKIN DUNTON, LL. D., AND MISS L. T. MOSES.

XIV.

NATURE LESSONS — SECOND YEAR.

The Sun.

IN the general work on the heavens the second year, the aim of the teacher will be to give the children the power of fixing the positions of the heavenly bodies with some degree of accuracy. The points of the compass, both cardinal and semi-cardinal, should be fixed both on the horizon and in the heavens above the horizon; and the zenith point should also be fixed. Daily exercises of two or three minutes while the children are out at recess will be valuable in this part of the work.

These exercises should consist of finding the points of the compass, and then the points half way, or a quarter of the way between any two points of the compass. Then one half and one fourth the distance should be found from any point of the compass to the zenith, and from the zenith to any point of the compass. These exercises should be continued till the children have attained a good degree of accuracy in finding these various distances.

The observations of the sun are to include, as last year, its form, size, position, and movement. The apparent size of the sun when near the horizon is to be compared with its apparent size when high in the heavens. The beauty of sunset is to be observed, and in the short winter days the beauty of sunrise is to be observed and compared with the beauty of the sunset.

In regard to the movements of the sun, the general movement from east to west is to be observed; and the time when it crosses a line running from the zenith to the southern point of the horizon is to be particularly observed. The facts that at noon the sun is farthest from the horizon, and that it is much farther above the southern horizon in the summer than it is in the winter are to be noticed.

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[1] Copyright, 1887, by Larkin Dunton, and Miss L. T. Moses.

The latter fact may be made clear to the children by having them observe how far the sun shines in at noon at a south window, and the consequent position of the rays on a line connecting its farthest limit into the room and the window-sill. The children observe that as the winter comes on the sun shines farther and farther into the room, and is consequently lower in the heavens. They will find that while in September the sun hardly shone half way across the floor, in December it has come away across the floor and shines up on the wall opposite the window.

Then the sunshine in the room goes back till in March it is where it was in September, and it still goes nearer to the window, and consequently the sun is going higher and higher in the heavens; till, when June comes, the sunlight but just comes into the room not a yard from the window. Then the children must conclude that the sun is nearly overhead. They can watch at home through the summer and see what will happen as the summer goes on.

In connection with this watching of the sun at noon, it is a good plan to set the children to watching the varying noon length of the shadow of some tall object near the school-house; a tree, a lamp post, or the school-house itself will answer this purpose. The teacher should have the shadow's length marked at the solstices, so that the great variation from winter to summer can be seen by the children. It is well to have the observation made that the sun rises and sets far north of east and west in the summer, and far south of these points in the winter. The more special observations in regard to these facts may be made the third year of this work.

Some work should be done in impressing on the children the beauty of the broad sunshine over the face of Nature. One of those bright days when the hillsides, the forests, and the meadows seem to sparkle and almost dance with brightness, should be chosen for this purpose.

The consideration of this use of beauty leads to the other uses, which may be brought to the children's minds by a consideration of what the flowers, grass, and trees, and what the birds, lambs, and even little kittens would do without the sunshine.

The Moon.

"How many of my children remembered to look at the moon again last night?" said Miss Foster to her class, one bright morning.

All hands were raised; for the children had been watching the moon for more than a week, and had become greatly interested in their watching.

"What do you want to tell me about the place where you saw the moon last night, compared with the place the night before?"

"It was farther to the east," said the child who was called upon. "It was so far to the east that I think we shall see it rise by to-morrow or next day, Miss Foster."

"That is a wise conclusion, Henry. Now who wants to tell me of its shape?"

"It has grown rounder. Indeed, it is almost quite round, except a little place on one side, where it looks as though a piece were taken out."

"Which side looks not quite full, Mary? Did you notice that?"

Mary looked a little ashamed; for Miss Foster's children, one and all, tried to see a thing they looked at, perfectly.

"Children, you may all shut your eyes and try to see the moon just as you saw it last night," said Miss Foster. "Now," she continued, "open your eyes. How many of you succeeded in getting a good picture? I am glad you did, Mary. Can you tell me now which side was not quite full?"

"The east side," said Mary, her eyes shining with pleasure.

"How many agree with Mary?"

All the children raise their hands, and Miss Foster tells them they are right, and that she is especially pleased that they take their pictures so clearly that they can always see them again correctly.

"But I know you all want to tell me something else about the moon," said Miss Foster; "so I will let you do so in a moment. I want you to shut your eyes once more and think about the height of the moon from the south point of the horizon, when it was nearest to, or on our noon line, or our line going — who can tell me where? — Yes, going from the zenith to the south point of the horizon. Now open your eyes. Who is ready to tell me? John may answer."

"I think the moon was very high on the noon line, Miss Foster; I think it was higher than last month. It looked almost overhead."

"You are right, John," said Miss Foster, after she had found that the children all agreed with John. "Now, I want you all to think of the place of the sun on our noon line the three months we have been watching, since the last of September; and the place of the moon on the noon line the same three months, and tell me something about the two. Well, Jenny, what do you say?"

"I think that when we began to look, the moon and sun were very nearly the same height on the noon line, and ever since the sun has been going lower and the moon going higher on the line," said Jenny.

The children all agreed with Jenny, and resolved to watch still to see which way the moon and sun moved on the noon line. Miss Foster now told them they could tell her what they had been longing to tell her ever since the beginning of the lesson.

"O, Miss Foster, the lovely, lovely clouds!" said the children, all together.

"Shut your eyes and see it all again, and then tell me what you see. Open your eyes now. I will begin at the back of the room, and every one shall tell in turn what he wishes; but, of course, if any one has said just what you were going to say, you will tell me that your thought has been given already. Be sure you have something to say that has not been said."

"The moon sailed among the clouds," began Henry.

"The clouds got out of the way of the moon," continued James.

"The clouds ran across the moon's face and did not stop to say, 'Pray, excuse me,'" laughed Jenny.

"There were beautiful blue clouds in the sky, and the moon sailed across them like a silver boat," said quiet, dreamy Lucy.

"The clouds before the moon had bright edges," said practical John.

"I think the clouds were lined with silver, and the lining showed on the edges," said the next one whose turn came.

"The moon shone through the edges of the clouds, and made them look shining and beautiful."

"The moon made the small stars twinkle out, when she came near them; she made even Jupiter look faint."

"Did the small stars faint away?" said our bright boy, Fred.

"The man in the moon played bo-peep with me," said Mary.

Several of the children now, and frequently after this, said they had thought the same as some of the others who had spoken.

"I think last night was the most beautiful night I ever saw," said Emma, when her turn came.

"How many agree with Emma?" asked Miss Foster; and she found nearly all the children had thought that.

"Miss Foster," said sweet little Grace, "I was thinking our dear Lord could not make Heaven much more beautiful for the angels than he made the sky last night for us, and I felt so glad He had given us the beautiful moon and the clouds, that I love Him."

"So do we all, Grace, and I hope we all thought to be glad and loving to our Father in Heaven, who gives us all beauty. We will at least all try to remember Him whenever we watch the things He has made for us."

Miss Foster then read the following poem to the children: —

GRACE AND THE MOON.

Dear little Grace, at the window stands,
Watching the moon, with folded hands,
As it moves among the clouds on high,
Sailing over the dark blue sky.

"How lovely our Father has made this night!
The clouds, the stars, the soft moonlight!
Pray tell me, Mamma, is such beauty given
To the angel children who dwell in Heaven?

"And those angel children who love and adore
The dear Lord of all, can they love Him more
Than His children on earth, who love all His beauty,
Can love Him for joy, and love Him for duty?"

Tears stood in the mother's happy eyes,
She kissed her child in glad surprise,
"We will love Him with all our might, my Grace,
We will love and serve Him in every place,

"Then whether our love be more or be less,
His love and His service our own hearts will bless,
And may be His love will help us love more,
Till we, as the angels can love and adore."

EDITORIAL.

"DO you believe in corporal punishment, and if so how should it be inflicted?" So reads a question from a young teacher.

A church creed once had an article beginning in this way: "I believe in the fall of our first parents," etc. Neither the one nor the other ought to be an article of faith for any person in a Christian country. Neither is a desirable thing to believe in. However, one might say "I believe that our first parents fell" etc., or "I believe that corporal punishment is sometimes justifiable."

BUT the intended question probably is: "Ought corporal punishment to be inflicted by the teacher upon the children in school?" If put in this form no categorical answer can be given. Corporal punishment is needed most among barbarous or half civilized people. Just so far as Christian principles and the forms of cultivated society prevail, just so far corporal punishment will not be needed. Yet some good teacher may find herself some day face to face with a set of lawless youngsters who can best be tamed and brought under proper restraint and subjection by brute force and physical pain. In that case let the switch be well laid on.

"HOW can I best secure and hold the attention of a class during the recitation?" Here is another query from a young teacher. No more important question can be asked. Yet it is akin to the question "How shall I keep school?" It would take a volume to answer it fully. First of all it is necessary for the teacher to be brim full of the subject to be taught; to be interested in it, in order to make it of special interest to the pupils. The best way to keep out evil thoughts is to fill the mind with good thoughts. The best way to keep pupils from pestering, hectoring, and worrying the teacher,—the best way to keep them from all sorts of play and mischief,—is to fill them full of interest in the lesson. Skill, ingenuity, and tact,—largely resulting from experience,—are necessary for the most successful work in this direction.

"DO you approve of one pupil helping another in the recitation room or at the blackboard?" How difficult it is to ask a question which can wisely be answered by a simple "yes" or "no." The teacher should ever be ready to help a pupil, and every pupil should help another whenever it can be done with advantage to the one helped. To help a pupil to understand what is meant by a blind question is always in order; to help one to obtain an answer without understanding the process needful to solve the problem is always wrong and hurtful. The true principles of teaching and the object sought by the lesson should be kept constantly before the mind of every pupil.

"WHAT is the largest city in the United States not on navigable water?" The above is not a question which should be answered either to teacher or pupil, but one which any teacher or any pupil in the geography class should find out for himself. But it is a very suggestive question. Mrs. Partington wisely remarked that it seemed to her "A wonderful illustration of the beneficence of the Creator that large rivers usually run by large towns." Get a set of bright children in the "first" or "second" class in geography started on such a subject and the discussion of the queries which will arise will not end to-day.

THE National Educational Association will hold its next annual meeting at Nashville, Tennessee, beginning July 16, 1889.

THE National Association of Superintendents will meet in Washington, D. C., March 6th, 7th, and 8th. The program will be furnished later.

THE STUDY OF SYNONYMS.

DIFFIDENT, MODEST, BASHFUL, AND SHY.

1. DIFFIDENT and MODEST are derived from the Latin.
   BASHFUL is derived from the Old French and SHY from the Anglo-Saxon.
2. Each of these words indicates feelings arising from self-distrust.
3. DIFFIDENCE is the positive distrust of oneself.
   MODESTY is the absence of self-confidence and all tendency to overestimate oneself.
   BASHFULNESS is an instinctive abashment or agitation of the spirits in coming in contact with other persons.
   SHYNESS is akin to BASHFULNESS and results from a feeling that every one is looking at us. It usually arises from excessive self consciousness.
   MODESTY is a virtue, while DIFFIDENCE, if carried to the extreme, leads to positive injustice to oneself and one's powers.
   BASHFULNESS often gives rise to mistakes and blunders, while SHYNESS usually produces a reserve or distance of manner which is often mistaken for haughtiness.
4. Had he seen his writings as the work of some one else he would have approved and praised them, but his DIFFIDENCE caused him to withhold them from the public.
   "And, that augmented all her other prayse.
   She MODEST was in all her deedes and words,
   And wondrous chast of life, yet loved of knights and lords."
   "Our orators, with the most faulty BASHFULNESS seem impressed rather with an awe of their audience than with a just respect for the truths they are about to deliver."
   "What makes you so SHY, my good friend?"

PEOPLE AND PERSONS.

1. PEOPLE and PERSONS are both derived from the Latin.
2. Both refer to population or a part of the population.
3. In colloquial language these words are often used as synonyms, as, many PEOPLE think so; many PERSONS say so. Strictly speaking PEOPLE should be used when individuals in the aggregate are spoken of, or in reference to a nation. The word PEOPLE is sometimes used as an expression of contemptuousness; as PEOPLE of that sort.
4. "For behold, I bring you tidings of great joy, which shall be to all PEOPLE."
   Seventy PERSONS were present at the reception.

PEOPLE AND NATION.

1. PEOPLE and NATION are both derived from the Latin.
2. When synonymous these words both refer to a tribe or race.
3. When speaking of a state, we use PEOPLE for the mass of the inhabitants

as distinguished from the rulers, and NATION for the entire political body including the rulers.

4. "The king declared that the PEOPLE had no right to any part in the government."
   The NATION seemed in a prosperous condition.

TEDIOUS AND IRKSOME.

1. TEDIOUS is derived from the Latin.
   IRKSOME is derived from the Old English.
2. Both mean wearisome or tiresome.
3. TEDIOUS refers to the weariness caused by time; — that is, the time taken up in doing a thing makes it TEDIOUS. The nature of the thing to be done makes it IRKSOME. Hence TEDIOUS refers to what is felt after a work is begun or a process commenced; while IRKSOME indicates the feeling which prevents one from undertaking it at all.
4. The little tasks that make up the daily routine of life, are oftentimes not IRKSOME in themselves, but the constant repetition makes their performance TEDIOUS.

TRAIN THE VOCAL MUSCLES.

Peter Piper's celebrated peck of pickled peppers has done good service in training the facile muscles of the lips. Every school should train all the pupils in the practice of pronouncing difficult combinations of letters. Teachers should not rely too much upon the *textbook*. They should collect and arrange in due order for frequent use, various supplementary aids in language, geography, arithmetic, etc. The following examples will be found useful in training the vocal muscles: —

Gaze on the gay gray brigade.
The sea ceaseth, and it sufficeth us.
Say, should such a shapely sash shabby stitches show?
Strange strategic statistics.
Give Grimes Jim's gilt gig-whip.
Sarah in a shawl shovelled soft snow softly.
She sells sea shells.
A cup of coffee in a copper coffee-pot.
Smith's spirit-flask split Phillip's sixth sister's fifth squirrel's skull.

HAPPY HOURS.

HOW THEY CELEBRATED CHRISTMAS AT WEST BEND.

BY WALTER H. MOWRY.

They were cousins and had not seen each other for nearly eight years. Sarah Constance Wilson was a teacher at West Bend, a small frontier town, and May Alice Crawford was also a teacher, but her school was in New York City. They were now spending a few days together before Sarah left again to begin her school after the Christmas holidays.

Both of our friends were bright and enthusiastic teachers and always on the outlook for new and better things to help them in their schools and to make their pupils more interested in the school work.

Sarah had spoken incidentally of her Christmas celebration just before leaving for the East, and May had at once asked her what she could do towards any kind of a celebration of Christmas out there in the wilds of Wisconsin, as she called it, and then Sarah told her what she had done to make the children have a pleasant time and also to give them some right thoughts and ideas of the day.

She said, "You see, May, they had never paid much attention there to Christmas. They had, to be sure, given some presents to each other at their homes, but there was no such observance of the day as we have here in the East till after I had been there two years. This time I told the boys that we would have a regular Christmas festival if they would help me, and they said they would and they did help right nobly too.

"I had them get a large amount of evergreen and bring it to the school the day before and then we made wreaths and long strips and trimmed the room with these. We also got two fine specimens of evergreen trees and placed these each side of the platform, from which we had taken my desk, and then everything was ready for the morrow, so far as I could make it. I did tremble a little for fear that some of those to whom I had given selections to recite would make a failure, for by a vote of the school we had decided to invite the parents and friends of all the scholars to the festival the next day.

"The eventful morning dawned as bright as any one could ask to have it and" — "What day was this?" asked May, interrupting, — "Why this was Friday. Christmas came on Sunday and we had our celebration on the last day of school before the vacation. As I was saying, the day was the brightest and it was also one of the coldest of the season. Some of the boys went over and built a rousing fire in the fireplace and so by the time most of us had arrived the room was as warm as we cared to have it.

"When the friends and children were all seated, one of the very smallest boys went upon the platform and repeated that bright bit of poetry by Miss Lippman which reads: —

"Neat Mrs. Santa Claus sat slowly rocking,
Thinking the while, as she darned Santa's stocking,
'What a kind fellow he is, to be sure;
Out in the cold on his long Christmas tour,
Filling the stockings quite up to the knees,
Loading with presents the bright Christmas trees.'

"So she sat thinking till, lo and behold!
In came old Santa Claus, out of the cold;
Shook off his overcoat, threw down his cap,
Took young Kris Kringle right up in his lap,
Saying, 'I'll tell you, if you wish to know,
All that I saw on the world down below.

"'Up in the clouds sat the old moon and I; —
All the young stars were alight in the sky, —
While from below came the merriest noise,
Just like the laughter of gay girls and boys;
So we peeped down from the fleecy cloud-rifts,
And in the meantime I shook out the gifts.

"'Sledges and carriages, French dolls and wax,
Some having real hair, and some having flax;
Into the houses they scattered, pell-mell.
Making more merriment than you could tell;
But the sad part of the story is this,
That the *rich* folks got the *most*, — little Kris.

"'Just where the lights burned the brightest, they'd fall;
'Sambo' would gather them up one and all, —
While the poor little folks looked on at the sight.
Now, dear Kris Kringle, do you think that was right?
Can't we arrange a new plan so, my dear,
That things can be managed more justly, next year?'

"When he had finished, in fact before he had more than half made his bow, the applause broke out and continued till I told him to go upon the platform again and with a bow thank the audience. Well, do you know, before I knew what he was about he had bowed to the people and was saying 'Tank oo for oor appaus, and I tink I did do it stremely well myself.'

"I did not know what to make of it till I learned that he had heard his aunt say that he did something 'extremely well.'

"After we had sung one or two appropriate pieces, one of the older girls was called upon and she gave us, with a very good effect, the old Christmas Carol which Longfellow has so beautifully translated. It begins, you will surely remember, like this:—

"I hear along our street
Pass the minstrel throngs;
Hark! they play so sweet,
On their Hautboys, Christmas songs!

This was received with applause also and this time I did not have to send the speaker back to acknowledge it, nor did she bring the house down as did the little three-year-old.

'The next number, if I remember correctly, was a little poem entitled 'The Christmas Tree,' which was recited by one of the boys. It is a pretty thing and for some reason clings to me so that I can repeat it now.

"A merry, merry Christmas!
To crown the closing year;
Peace and good will to mortals,
And words of holy cheer!

"The grand-dame greets her children,
And smiles their joy to see,
On Christmas eves of olden
As eager once was she.

"With peace serene and beautiful
Her waning life shall shine,
As Christmas crowns the twelvemonths
With light and joy divine.

"After this recitation I was rash enough to attempt to read the 'Christmas Bells,' by Longfellow, and though I thought once or twice that I should collapse as I looked over the large audience, for it was a very large one for that place, and saw some of the young fellows who had been trying to make love to me standing in the rear and watching me with evident supreme admiration, if any judgment can be made from the width at which they had their mouths open, I succeeded in doing so well that I was obliged to read not only the last verse but the whole of the poem again.

"Before the packages of chocolate creams and caramels which I had made for each of the scholars were distributed, the smallest girl in the school recited this little verse by Phoebe Cary:—

"This happy day, whose risen sun
Shall set not through eternity,
This holy day when Christ the Lord
Took on him our humanity,
For little children everywhere
A joyous season still we make,
We bring our precious gifts to them,
Even for the dear child Jesus' sake.

"When this was finished, I called up two of the larger boys and asked them to step out into the entry and bring in two baskets which they would find on the shelf, and distribute one of the packages to each pupil in the room.

"This finished the exercise as I had planned it, but the good people of the place would stop and thank me for teaching their children not only the three R's, but some of the beautiful and happy things which are not in the school books."

"Well," said May, "you did do well, and now I would give you the plan we have for celebrating New Year's day, but it is not half so good a one as yours, so I will spare you the recital of it. Indeed, I do not believe it is quite possible to have so interesting an entertainment in the city as in the country. But you can come and witness ours and judge for yourself."

EXAMINATION QUESTIONS

FOR ADMISSION TO THE HIGH SCHOOLS OF THE CITY OF CAMBRIDGE, MASS., JUNE, 1888.

LANGUAGE.

"I rose and prepared to leave the Abbey. As I descended the flight of steps which lead into the body of the building, my eye was caught by the shrine of Edward the Confessor, and I ascended the small staircase that conducted to it, to take from thence a general survey of this wilderness of tombs."

Make a list of the personal and the relative pronouns used in the lines quoted.
Make a list of the nouns used in the lines quoted.
Make a list of the verbs used in the lines quoted.
Give the principal parts of the irregular verbs used in the lines quoted.
Present. Past. Perfect Participle.
Write five sentences to illustrate five of the rules for the use of capitals.

"The mirth of the company was greatly promoted by the humors of the eccentric personage whom Mr. Bracebridge always addressed with the quaint appellation of Master Simon."

Write the above lines changing the first verb to the active voice, and the second verb to the passive voice.

Are the following modifiers, as used above, adjective or adverbial? What does each modify?

MODIFIERS.

(1) Of the company; (2) greatly; (3) by the humors; (4) of the eccentric personage; (5) whom Mr. Bracebridge always addressed, etc.; (6) always; (7) with the quaint appellation.

Give the grammatical construction of *mirth*. Give the grammatical construction of *whom*. Define *promoted*.* Define *humors*.* Define *eccentric*.* Define *appellation*.* Compare *little*. Write *hero* in the plural number and possessive case. Write a compound sentence that requires the use of a semicolon.

Make a set of miscellaneous questions suitable for an examination for admission to a High School. Let 1 and 2 be in history; 3 and 4, in geography; 5 and 6, in grammar; 7 and 8, in arithmetic; 9 and 10, in any subject.

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* As used above.

DESCRIPTION OF A CAMBRIDGE HORSE-CAR.

Size, cost, materials, color, seating capacity, number often carried, miles run per day, daily receipts, incidents connected with the trips, etc. Pupils are not expected to know the exact measurements and figures, but they will estimate them as closely as they can.

DICTATION EXERCISE.

[*Marked for Spelling, Punctuation, and the use of Capitals.*]

1. **What is the principal business in the village?**
2. **Did the treasurer give a receipt for the money?**
3. **Lettuce and asparagus are spring vegetables.**
4. **Never read anonymous letters.**
5. **Will you please call at your convenience?**
6. **Mary received a watch on her twelfth birthday.**
7. **The report of the accident is not believed.**
8. **He was a man of principle and of undaunted courage.**
9. **Wednesday, May 30, was Memorial Day.**
10. **The time for picnics has come.**
11. **Did he neglect so favorable an opportunity?**
12. **The class recited many familiar quotations.**
13. **The boy was transferred to another school.**
14. **The governor addressed the assembly in fitting words.**
15. **His neighbors were his best friends.**
16. **He died on the voyage and was buried in the ocean.**
17. **Let the case be considered without prejudice.**
18. **Can you wait patiently till the physician arrives?**
19. **A separate room was assigned to each guest.**
20. **The schools will open on Monday, the tenth of September.**

HISTORY.

In what year were Boston and Cambridge settled?
By what colony?
Were these colonists called "Puritans" or "Pilgrims"?
Were they from the poorer or the well-to-do classes?
In what colony was there toleration for all forms of religion?
Where was Fort Du Quesne?
What British officer was mortally wounded on his way to take this fort?
Mention one of the principal causes of the War for Independence.
What led to the War of 1812?
What caused the Civil War?
In what state is Gettysburg?
When was the battle fought?
Who commanded the Union army?
Who commanded the Confederate army?
Which army was successful?
For what has Gettysburg become noted since the war?

Cross out from the following list the name of every person who during the Revolutionary War was opposed to the independence of the Colonies.

General Gates.
General Clinton.
Colonel St. Leger.
General Gage.

General Greene.
Roger Sherman.
Admiral Howe.
Lord North.
Major André.
Capt. Paul Jones.
General Howe.
General Lee.
General Herkimer.
General Schuyler.
Richard Henry Lee.
Count Rochambeau.
Samuel Adams.
General Tarleton.
General Burgoyne.
General Cornwallis.

Cross out from the following list the name of every person who during the Civil War endeavored to establish the Southern Confederacy.

General Johnston.
General Schofield.
General Kilpatrick.
General Lee.
General Buell.
General Howard.
Captain Semmes.
General McDowell.
Major Anderson.
General Hood.
General Thomas.
General Pope.
Admiral Dahlgren.
General Jackson.
General Early.
General Lyon.
General Beauregard.
General Bragg.
Captain Winslow.
General Rosecrans.

INTERESTING HISTORICAL FACTS.

Each pupil may write such facts as seem to him of special importance.

GEOGRAPHY.

What can you say about Pennsylvania and its largest city?

Name five of the principal cities in England.

Define latitude, and by a drawing represent parallels of latitude.

What can you say of Japan and of its government?

What two men are intimately associated with Central Africa?

How many members in each branch of the legislature of Massachusetts?

On which side of the Potomac is the District of Columbia?

About how many miles is Washington from Boston?

What can you say of the area and population of the German Empire? Add a few words about the Emperor.

Why do two rivers rising near each other sometimes flow in different directions?

On or near what river or other body of water is Milwaukee? Cleveland? St. Louis? Liverpool? Constantinople?

What is the most southern cape of New Jersey? Norway?

Which of the following are productions of tropical regions? Indicate by a cross (X). Coffee. Tobacco. Potatoes. Cotton. Hemp. Bananas. Oranges. Pine-apples. Wheat. Sugar-cane. Olives. Flax. Rosewood. Beans. Fir-trees. Spices.

What important river flows into the White Sea? Black Sea? Caspian Sea? Gulf of Lion? Bay of Biscay?

What lands are separated by the Strait of Dover? Strait of Gibraltar?

Mention three of the railroads leading out of Boston.

What cities and towns border upon Cambridge, or are separated from it by Charles River?

Draw a map of South America, showing its principal rivers and mountains, and the location of Rio Janeiro, Buenos Ayres, Santiago, Lima, and Montevideo. The names of the rivers, mountains, etc., and also of the four prominent capes, should be written on the map in their proper places.

Write upon the following topics: —

THE GRAND DIVISIONS OF LAND. Their names — their comparative size — their location — their coast-lines.

CLIMATE. What is it? — Upon what does it depend?

MENTAL ARITHMETIC.

(*Twenty-five minutes allowed for this Exercise, pencils are not to be used except in writing the answers.*)

1. To what number must 12 be added 8 times to make 297?

2. If 3 men earn $48 in 2 weeks, how much would 4 men earn in 3 weeks?

3. If ¾ of a bushel of corn can be bought for ⅗ of a dollar, how many bushels can be bought for 4 dollars?

4. Two boys, John and James, earned 75 cents by shovelling snow. John worked 2 hours, and James 3 hours; how much should each receive?

5. If a boy should buy a dozen marbles, and sell them for 6 cents apiece and by so doing gain 50 per cent., how much did he give for the dozen marbles?

6. A man sold a watch for $10 more than he gave for it, and thereby gained 20 per cent.: how much did he receive for the watch?

7. If a bin 8 feet long, 6 feet wide, and 4 feet high will hold 8 tons of coal, how many tons can be put into a bin 4 feet long, 3 feet wide, and 2 feet high?

8. What is the amount of $500 for 2 years and 6 months at 10 per cent.?

9. How much will it cost at $2 a foot for an iron fence to enclose the lot bought for the new city hall, the lot being 230 feet long, and 200 feet wide?

10. A man has a straight fence made of three lengths of wire. The three wires are supported by 11 posts, the distance between the posts being 10 feet. These posts are each 6 inches in diameter, with holes through which the wires pass. The wires are fastened on the outside of the end posts by twisting them around spikes driven into the posts, and it took 3 inches of wire to fasten each end of each wire. How many feet of wire were required for the fence?

ARITHMETIC.

Five Minutes allowed for this Exercise.

ADDITION.

A

6 7	7 8	5 1
4 5	3 7	5 6
9 0	7 4	6 4
5 9	8 5	1 7
4 8	4 7	7 6
2 7	8 5	4 3
5 2	3 8	

	B	
4 8	7 3	8 6
3 5	6 7	2 7
9 2	8 9	9 2
2 8	6 4	3 8
6 7	6 5	7 9
5 4	9 6	3 4
8 9	4 7	

SUBTRACTION.	MULTIPLICATION.	DIVISION.
1140735	830475	486)3448673
495826	8069	

1. If 120 acres of land cost $3,000, how many acres of land half as valuable can be bought for $4,500?

2. Divide 16 ten-millionths by 25 thousandths, and subtract the quotient from one.

3. What principal at 7 per cent. will amount to $659.40 in eight months?

4. A man bought a hat for $5 and sold it for $6; what per cent. did he gain?

5. A pile of wood, containing 10½ cords, is 20 feet long, and 8 feet wide; how high is it?

6. What is the interest of $1,000 for 2 years, 3 months, 10 days, at 4½ per cent?

7. Find the proceeds of a note for $500, dated May 10, payable in 60 days, and discounted at a bank June 9 at 6 per cent.

8. How many square feet of leather will cover the top and sides of a box 3 feet long, 2 feet wide, and 2 feet 6 inches high?

9. Having lost 40 per cent. of my money, I have $750 left. How much had I at first?

10. What is the value of 18 shares of bank stock at 8⅓ per cent. discount, the par value of each share being $150?

11. A man bought a lot of land 40 rods long and 30 rods wide, bounded by four streets running at right angles to each other. He laid out two streets 30 feet wide through the centre of the lot, one running lengthwise of it, and the other crosswise. He sold the remainder of the land for house-lots, at 50 cents per square foot. If he gave $120,000 for the land, how much did he make by the transaction, no allowance being made for interest on the money invested?

12. What is the cash value of a bill of goods amounting to $465.90, on the face of which a discount of 20 per cent. is made, and on the balance another of 5 per cent?

BOOK-KEEPING.

What is an invoice?

When is an account balanced?

On which side of the cash account should cash received be entered?

Should the credit side of an account be on the right or left page?

On which side of a man's account would the money he pays to you be entered?

June 20, 1888, I bought of William Ware & Co. 5 copies Maury's Geography at $1.32; 35 copies Parker's Book-keeping at $1.26, and one Worcester's Dictionary for $8.10. The usual discount of 16⅔ per cent. is allowed on the bill. Make out the bill which should accompany the books, showing the amount due, and fill out a blank check in payment of the bill. In both, use your own names as purchaser.

BOOK NOTICES.

TOWN AND COUNTRY SCHOOL BUILDINGS. A collection of Plans and Designs for Schools of various sizes, graded and ungraded, with descriptions of construction of sanitary arrangements, light, heat, and ventilation. By E. C. Gardner, architect. New York: E. L. Kellogg & Co. 1888.

This entirely new work will be welcomed by multitudes. It will prove a "God send" to all those towns and districts throughout the country, which have schoolhouses to build. The plans begin with a cheap building of logs for pioneer wants. It then describes how temporary expedients may be resorted to by a cheap building of one room built of rough lumber. Then a single room with abundant conveniences; then the same plan with a different exterior; then a country schoolhouse adapted to a multitude of cases, with different elevations, perspective, floor plans, and details. After this the architect gives us a great variety of houses for village and town schools, some cheaper, some more expensive, some of wood, some of brick, and some of stone. These plans are for neat, comfortable, artistic buildings. The value of different materials for building is discussed, and such important matters as lighting, heating, and ventilation are thoroughly considered. The influence of these plans should unquestionably be great in improving the style and the comfort of the school buildings of the land. The book is excellently printed on the best paper, with elegant engravings, and the publishers are deserving of high praise for the volume.

PANSIES FOR THOUGHTS. From the Writings of "Pansy" (Mrs. G. R. Alden). Compiled and arranged with an appropriate text for each day, by Grace Livingston, author of "A Chautauqua Idyl." Boston: D. Lothrop Co. Price, 75 cents.

Mrs. Alden's earnestness and fervor are magnetic, and all people are charmed with her bright, strong, helpful stories. This volume, compiled under "Pansy's" own eye, will prove a treasure to all who appreciate her writings. The exquisite cover with its golden pansies is fitly symbolical of the contents, and the book will make a charming gift book for all times.

ST. NICHOLAS. An Illustrated Magazine for Young Folks. Conducted by Mary Mapes Dodge. Volume XV. November 1887, to October, 1888. In two parts. New York: The Century Company. Pp. 960. Price $4.00.

These two volumes for Christmas presents to the young folks are really something superlative. It would be impossible to tell all the excellences of "This primer of juveniles." The sixteenth volume, which begins in November, will be what the editor calls "An All-around-the-world Year."

Of course the bulk of the contents, as heretofore, will relate to American subjects; but young America is always glad to learn what goes on in the world outside, and the stories and sketches of foreign life which *St. Nicholas* is to present will be a remarkably attractive feature. We have space here for only the more prominent announcements. There will be ever so many articles on

"America"; lots of stories from Europe; Papers on Siberia, China, Japan, etc.; Africa, Australia, the Arctic Regions, and the Islands of the Sea. There can hardly be a more attractive or pouplar juvenile than the great favorite with all the young folks, "St. Nicholas."

THE CENTURY ILLUSTRATED MONTHLY MAGAZINE. May, 1888, to October, 1888. Vol. XXXVI. New York: The Century Company. Pp. 960. Price, $3.00.

This is a superb volume of nearly a thousand pages of large size and filled with the most valuable and entertaining matter. The paper and print are of the best and the illustrations simply superb. Besides stories, essays, and miscellaneous illustrated articles, etc., during the year, beginning with the November number, will be "Gallery of Italian Masters," the papers by W. J. Stillman with illustrations by Timothy Cole; "The Siberian Exile System," by Mr. George Kennan; "Stories of Louisiana," by George W. Cable; "The Romance of Dollard," by Mrs. Mary Hartwell Catherwood; "Lincoln in the War," by Nicolay and Hay; "Supplementary War Articles"; articles on "Japan," "Ireland," and much other valuable matter. Surely never before was there such an array of talent concentrated in one magazine.

THE ESSENTIALS OF GEOGRAPHY FOR SCHOOL YEAR 1888-9. By G. C. Fisher. Fourth Annual Publication. Boston: N. E. Publishing Company. 1888. Pp. 88. With perforated maps, 50 cents. Without maps, 40 cents.

This book is an annual publication, revised every August, to make it authoritative, noting the geographical changes that are continually occurring. It contains all the political and descriptive geography that a pupil should be required to memorize. As a concise textbook to be placed in the hands of the pupil, the book is invaluable, and no teacher of geography should undertake to do without it.

Among the special features of the book are the following: I. Productions are taught by belts as determined by latitude and elevation, instead of the old way by states and countries. Knowing what belt a country is in, a child should know what its productions are. II. The Topical System is carried into the study of the maps in a manner to avoid that loss of time which has been occasioned in the past by requiring the pupil to search laboriously for this or that bay, cape, strait, etc. III. Perforated Maps for map sketching are sold either with the book or separately. They reduce the amount of time to be devoted to Geography, by substituting *visible* for *verbal* descriptions. IV. The Statistical Tables contained in the appendix give mileage of railroads, population, reigning sovereigns, and other information revised and renewed every year.

BOSTON AND ITS SUBURBS. A Guide Book. Boston: Stanley & Usher. 1888. Pp. 204. With a map.

This is a capital little guide book for Boston and vicinity. It gives numerous "walks about Boston," thus reaching by the shortest way the most conspicuous places. The descriptions are brief, clear, and just what one wants. It should have a large sale and will be found of value to teachers.

THE SONG CENTURY. Compiled by C. W. Bardeen. Syracuse, N. Y. Pp. 87. Paper covers. Price 15 cents.

A bright, happy collection of songs, new and old, well printed, with many exercises for teaching them. A capital little book, which will have a wide sale.

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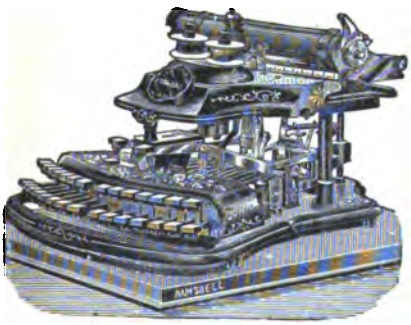

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